

All Publications of the Mid-Continent Ecology Division
Sorted by Author
Updated 6/21/04

A

- Adams, C.E. and H.G. Stefan. 1997. Field data on lake ice covers: dependence on lake characteristics and climate. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1997-16
- Adams, J.V., M.C. Fabrizio, and G.L. Curtis. 1996. Comparison of prey fish density estimates from acoustic and bottom trawl surveys in northeastern Lake Michigan. National Biological Service, Great Lakes Science Center, Ann Arbor, MI for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-18
- Adelman, I. R. and Smith, L. L., Jr. Standard test fish development. Part I. Fathead minnows (*Pimephales promelas*) and goldfish (*Carassius auratus*) as standard fish in bioassays and their reaction to potential reference toxicants. EPA 600/3-76/061a. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800940. Project officer: R.W. Andrew
- Adelman, I. R. and Smith, L. L., Jr. Standard test fish development. Part II. Chronic toxicity of Guthion to the fathead minnow (*Pimephales promelas* Rafinesque). EPA 600/3-76/061b. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800940. Project officer: R.W. Andrew
- Ahearn, D. G.; Crow, S. A., and Cook, W. L. Microbial interactions with pesticides in estuarine surface slicks. EPA 600/3-77-050. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Gulf Breeze, FL, Contract # R803141. Project officer: A.W. Bourquin
- Ahmad, N., D. Benoit, L. Brooke, D. Call, A. Carlson, D. DeFoe, J. Huot, A. Moriarity, J. Richter, P. Shubat, G.D. Veith, and C. Walbridge. 1984. Aquatic toxicity tests to characterize the hazard of volatile organic chemicals in water: A toxicity data summary - Parts I and II. EPA 600/3-84-009. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-14. Project co-coordinator: J.M. McKim/R.A. Drummond
- Allison, D. T. Use of exposure units for estimating aquatic toxicity of organophosphate pesticides. EPA 600/3-77/077. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Allison, D. T. and Hermanutz, R. O. Toxicity of diazinon to brook trout and fathead minnows. EPA 600/3-77/060. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Amato, J.R., S.E. Baker, E. Makynen, and L. Eisenschenk. 1990. Toxicity identification evaluation for Turkey Creek Wastewater Treatment Plant, Joplin, MO. NETAC Technical Report 22-90. National Effluent Toxicity Assessment Center, Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1990-23
- Amato, J. R., D. I. Mount, E. J. Durhan, M. T. Lukasewycz, G. T. Ankley, and E. D. Robert. 1992. An example of the identification of diazinon as a primary toxicant in an effluent. *Environ. Toxicol. Chem.* 11:209-16 #464
- Anderson, E.B., R. Hedin, R.L. Huss, A. Jarvinen, J.A. Johnson, E.A. Lundmark, and A. Pilli. 1989. Ranking of pesticide inert ingredients using the AQUIRE data base and structure activity relationships. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-45
- Anderson, E.B., G.D. Veith, and D. Weininger. 1987. SMILES: A line notation and computerized interpreter for chemical structures. Environmental Research Brief, EPA 600/M-87/021. U.S. Environmental Protection Agency, Cincinnati, OH. #1987-38
- Anderson, R.L. 1980. Chironomidae toxicity tests - biological background and procedures. In: *Aquatic invertebrate bioassays*. A.L. Buikema, Jr. and J. Cairns, Jr., eds. Pp. 70-80. ASTM STP 715. American Society for Testing and Materials, Philadelphia, PA. #1980-13
- Anderson, R.L. 1990. Laboratory methods for appraising safety of a microbial pest control agent in freshwater systems. Internal report. Environmental Research Laboratory, Office of Research and

- Development, U.S. Environmental Protection Agency, Duluth, MN. #1990-29
- Anderson, R. L. 1982. Toxicity of fenvalerate and permethrin to several nontarget aquatic invertebrates. *Environ. Entomol.* 11:1251-57 #232
- Anderson, R. L. 1989. Toxicity of synthetic pyrethroids to freshwater invertebrates. *Environ. Toxicol. Chem.* 8:401-10 #374
- Anderson, R. L. and D. L. DeFoe. 1980. Toxicity and bioaccumulation of endrin and methoxychlor in aquatic invertebrates and fish. *Environ. Pollut. Ser. A.* 22:111-21 #197
- Anderson, R. L. and J. A. Mutchmor. 1971. Temperature acclimation in *Tribolium* and *Musca* at locomotory, metabolic, and enzyme levels. *J. Insect Physiol.* 17:2205-19 #48
- Anderson, R.L., L. Shannon, and E. Mead. 1989. Distribution, persistence and toxicity of a biological control agent in a freshwater microcosm and natural system. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-52
- Anderson, R.L. and P. Shubat. 198? Toxicity of AC 222-705 to *Gammarus lacustris*, *Pteronarcys dorsata* and *Brachycentrus americanus*: effects in relationship to exposure duration and concentration . Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #198?-10
- Anderson, R. L. and P. Shubat. 1983. Insecticide effects on normal development and hatch of embryos of *Paratanytarsus parthenogeneticus* (Diptera: Chironomidae). *Great Lakes Entomol.* 16:177-81 #255
- Anderson, R. L. and P. Shubat. 1984. Toxicity of flucythrinate to *Gammarus lacustris* (Amphipoda), *Pteronarcys dorsata* (Plecoptera) and *Brachycentrus americanus* (Trichoptera): Importance of exposure duration. *Environ. Pollut. Ser. A.* 35:353-3654 #273
- Anderson, R.L. and R.L. Spehar. 1976. Freshwater invertebrate bibliography: pollution, biology, methods. Report: Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1976-15
- Anderson, R. L., C. T. Walbridge, and J. T. Fiandt. 1980. Survival and growth of *Tanytarsus dissimilis* (Chironomidae) exposed to copper, cadmium, zinc, and lead. *Arch. Environ. Contam. Toxicol.* 9:329-35 #198
- Anderson, S. L. and T. J. Norberg-King. 1991. Letter to the editor: Precision of short-term chronic toxicity tests in the real world. *Environ. Toxicol. Chem.* 10:143-45 #439
- Andren, A.; Anderson, M.; Loux, N., and Talbot, R. Element flow in aquatic systems surrounding coal-fired power plants/: Wisconsin Power Plant Impact Study. EPA 600/3-80/076. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803971. Project officer: G.E. Glass
- Andresen, N.A., E.F. Stoermer, and R.G. Kreis, Jr. 2000. New nomenclatural combinations referring to diatom taxa which occur in the Laurentian Great Lakes of North America. *Diatom Research*, 15(2):413-418. #2000-10
- Andrew, R. W. 1975. Inexpensive solid-state modification of the Heathkit polarograph. *Chem. Instrum.* 6:163-72 #114
- Andrew, R. W., K. E. Biesinger, and G. E. Glass. 1977. Effects of inorganic complexing on the toxicity of copper to *Daphnia magna*. *Water Res.* 11:309-15 #140
- Andrew, R.W. 1974. Correlations of copper (II) toxicity with ionic activities in natural waters. Unpublished research seminar. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1974-12
- Andrew, R.W. 1970. Distribution of taconite tailings in the sediments of the western basin of Lake Superior. Presented at the Lake Superior Enforcement Conference, September 25, 1970. #1970-1
- Andrew, R.W. 1973. Mineralogical and suspended solids measurements of water, sediment and substrate samples for 1972 Lake Superior study: Analytical methods. Unpublished data report. National Water Quality Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1973-5
- Andrew, R.W. 1973. Mineralogical and suspended solids measurements of water, sediment and substrate samples for 1972 Lake Superior study: II. Stream sediments. Unpublished data report. National Water Quality Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1973-6

- Andrew, R.W. 1967. Physiological chemistry and toxicity of cadmium to fish. Unpublished research seminar. #1967-2
- Andrew, R.W. 1976. Toxicity relationships to copper forms in natural waters. In: *Toxicity to Biota of Metal Forms in Natural Water*, Andrew, R.W., Hodson, P.V. and Konasewich, D.E., eds., pp. 127-144. #1976-18
- Andrew, R.W., D.A. Benoit, J.G. Eaton, J.M. McKim, and C.E. Stephan. 1977. Evaluation of an application factor hypothesis. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1977-14
- Andrew, R.W. and G.E. Glass. 1974. Amperometric titration methods for total residual chlorine, ozone, and sulfite. Unpublished report. National Water Quality Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1974-1
- Andrew, R.W. and G.E. Glass. 1970. Effect of taconite tailings on algal growth. Unpublished report. National Water Quality Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1970-2
- Andrew, R.W. and G.E. Glass. 1970. Physical characteristics of green water along the Minnesota shore of Lake Superior. Unpublished report. #1970-11
- Angradi, T., R. Hood, and D. Tarter. 2001. Vertical, longitudinal and temporal variation in the macrobenthos of an Appalachian Headwater stream system . *American Midland Naturalist*, 146:2:223-242. #2001-10
- Angradi, T.R., S.M. Hagan, and K.W. Able. 2001. Vegetation type and the intertidal macroinvertebrate fauna of a brackish marsh: *Phragmites* vs *Spartina*. *Wetlands*, 21(1):75-92. #2001-2
- Ankley, G. T. 1996. Evaluation of metal/acid-volatile sulfide relationships in the prediction of metal bioaccumulation by benthic macroinvertebrates. *Environ. Toxicol. Chem.* 15:2138-46 #595
- Ankley, G. T., D. A. Benoit, J. C. Balogh, T. B. Reynoldson, K. E. Day, and R. A. Hoke. 1994. Evaluation of potential confounding factors in sediment toxicity tests with three freshwater benthic invertebrates. *Environ. Toxicol. Chem.* 13:627-35 #521
- Ankley, G. T., D. A. Benoit, R. A. Hoke, E. N. Leonard, C. W. West, G. L. Phipps, V. R. Mattson, and L. A. Anderson. 1993. Development and evaluation of test methods for benthic invertebrates and sediments: Effects of flow rate and feeding on water quality and exposure conditions. *Arch. Environ. Contam. Toxicol.* 25:12-19 #490
- Ankley, G. T., W. J. Berry, D. M. Di Toro, D. J. Hansen, R. A. Hoke, D. R. Mount, M. C. Reiley, R. C. Swartz, and C. S. Zarba. 1996. Letter to the editor: Use of equilibrium partitioning to establish sediment quality criteria for nonionic chemicals: A reply to Iannuzzi et al. *Environ. Toxicol. Chem.* 15:1019-24 #596
- Ankley, G. T., V. S. Blazer, S. M. Plakas, and R. E. Reinert. 1989. Dietary lipid as a factor modulating xenobiotic metabolism in channel catfish (*Ictalurus punctatus*). *Can. J. Fish. Aquat. Sci.* 46:1141-46 #375
- Ankley, G. T. and L. P. Burkhard. 1992. Identification of surfactants as toxicants in a primary effluent. *Environ. Toxicol. Chem.* 11:1235-48 #465
- Ankley, G. T., D. J. Call, J. S. Cox, M. D. Kahl, R. A. Hoke, and P. A. Kosian. 1994. Organic carbon partitioning as a basis for predicting the toxicity of chlorpyrifos in sediments. *Environ. Toxicol. Chem.* 13:621-26 #522
- Ankley, G. T. and S. A. Collyard. 1995. Influence of piperonyl butoxide on the toxicity of organophosphate insecticides to three species of freshwater benthic invertebrates. *Comp. Biochem. Physiol.* 110C:149-55 #552
- Ankley, G. T., S. A. Collyard, P. D. Monson, and P. A. Kosian. 1994. Influence of ultraviolet light on the toxicity of sediments contaminated with polycyclic aromatic hydrocarbons. *Environ. Toxicol. Chem.* 13:1791-96 #523
- Ankley, G. T., P. M. Cook, A. R. Carlson, D. J. Call, J. A. Sorensen, H. F. Corcoran, and R. A. Hoke. 1992. Bioaccumulation of PCBs from sediments by oligochaetes and fishes: comparison of laboratory and field studies. *Can. J. Fish. Aquat. Sci.* 49:2080-2085 #466
- Ankley, G. T., S. J. Degitz, S. A. Diamond, and J. E. Tietge. 2004. Assessment of environmental stressors potentially responsible for malformations in North American anuran amphibians. *Ecotoxicol. Environ. Saf.* 58:7-16 #819
- Ankley, G. T., D. M. Di Toro, D. J. Hansen, and W. J. Berry. 1996. Assessing the ecological risk of metals in sediments. *Environ. Toxicol. Chem.* 15:2053-55 #597

- Ankley, G. T., D. M. Di Toro, D. J. Hansen, and W. J. Berry. 1996. Technical basis and proposal for deriving sediment quality criteria for metals. *Environ. Toxicol. Chem.* 15:2056-66 #598
- Ankley, G. T., S. A. Diamond, J. E. Tietge, G. W. Holcombe, K. M. Jensen, D. L. DeFoe, and R. Peterson. 2002. Assessment of the risk of solar ultraviolet radiation to amphibians. I. Dose-dependent induction of hindlimb malformations in the northern leopard frog (*Rana pipiens*). *Environ. Sci. Technol.* 36:2853-58 #774
- Ankley, G. T., J. R. Dierkes, D. A. Jensen, and G. S. Peterson. 1991. Piperonyl butoxide as a tool in aquatic toxicological research with organophosphate insecticides. *Ecotoxicol. Environ. Saf.* 21:266-74 #440
- Ankley, G. T., R. J. Erickson, G. L. Phipps, V. R. Mattson, P. A. Kosian, B. R. Sheedy, and J. S. Cox. 1995. Effects of light intensity on the phototoxicity of fluoranthene to a benthic macroinvertebrate. *Environ. Sci. Technol.* 29:2828-33 #553
- Ankley, G. T., R. J. Erickson, B. R. Sheedy, P. A. Kosian, V. R. Mattson, and J. S. Cox. 1997. Evaluation of models for predicting the phototoxic potency of polycyclic aromatic hydrocarbons. *Aquat. Toxicol.* 37:37-50 #639
- Ankley, G. T., R. A. Hoke, J. P. Giesy, and P. V. Winger. 1989. Evaluation of the toxicity of marine sediments and dredge spoils with the Microtox® bioassay. *Chemosphere.* 18:2069-75 #376
- Ankley, G. T., K. M. Jensen, M. D. Kahl, J. J. Korte, and E. A. Makynen. 2001. Description and evaluation of a short-term reproduction test with the fathead minnow (*Pimephales promelas*). *Environ. Toxicol. Chem.* 20:1276-90 #760
- Ankley, G. T., K. M. Jensen, E. A. Makynen, M. D. Kahl, J. J. Korte, M. W. Hornung, T. R. Henry, J. S. Denny, R. L. Leino, V. S. Wilson, M. C. Cardon, P. C. Hartig, and L. E. Gray. 2003. Effects of the androgenic growth promoter 17-β-trenbolone on fecundity and reproductive endocrinology of the fathead minnow. *Environ. Toxicol. Chem.* 22:1350-1360 #790
- Ankley, G. T., R. D. Johnson, N. E. Detenbeck, and S. P. Bradbury. 1997. Development of a research strategy for assessing the ecological risk of endocrine disruptors. *Reviews in Toxicology.* 1:71-106(231-267) #666
- Ankley, G. T., M. D. Kahl, K. M. Jensen, M. W. Hornung, J. J. Korte, E. A. Makynen, and R. L. Leino. 2002. Evaluation of the aromatase inhibitor fadrozole in a short-term reproduction assay with the fathead minnow (*Pimephales promelas*). *Toxicological Sciences.* 67:121-30 #770
- Ankley, G. T., A. Katko, and J. W. Arthur. 1990. Identification of ammonia as an important sediment-associated toxicant in the lower Fox River and Green Bay, Wisconsin. *Environ. Toxicol. Chem.* 9:313-22 #404
- Ankley, G. T., E. N. Leonard, and V. R. Mattson. 1994. Prediction of bioaccumulation of metals from contaminated sediments by the oligochaete, *Lumbriculus variegatus*. *Water Res.* 28:1071-76 #524
- Ankley, G. T., K. Liber, D. J. Call, T. P. Markee, T. J. Canfield, and C. G. Ingersoll. 1996. A field investigation of the relationship between zinc and acid volatile sulfide concentrations in freshwater sediments. *J. Aquat. Ecosys. Health.* 5:255-64 #599
- Ankley, G. T., K. B. Lodge, D. J. Call, M. D. Balcer, L. T. Brooke, P. M. Cook, R. G. Kreis, A. R. Carlson, R. D. Johnson, G. J. Niemi, R. A. Hoke, C. W. West, J. P. Giesy, P. D. Jones, and Z. C. Fuying. 1992. Integrated assessment of contaminated sediments in the Lower Fox River and Green Bay, Wisconsin. *Ecotoxicol. Environ. Saf.* 23:46-63 #467
- Ankley, G. T., V. R. Mattson, E. N. Leonard, C. W. West, and J. L. Bennett. 1993. Predicting the acute toxicity of copper in freshwater sediments: Evaluation of the role of acid-volatile sulfide. *Environ. Toxicol. Chem.* 12:315-20 #491
- Ankley, G. T., O. G. Mekenyany, V. B. Kamenska, P. K. Schmieder, and S. P. Bradbury. 2002. Reactivity profiles of ligands of mammalian retinoic acid receptors: a preliminary COREPA analysis. *SAR and QSAR in Environ. Res.* 13:365-77 #768
- Ankley, G. T., O. G. Mekenyany, P. A. Kosian, E. A. Makynen, D. R. Mount, P. D. Monson, and D. J. Call. 1996. Identification of phototoxic polycyclic aromatic hydrocarbons in sediments through sample fractionation and QSAR analysis. *SAR and QSAR in Environ. Res.* 5:177-83 #600
- Ankley, G. T., E. Mihaich, R. Stahl, D. Tillitt, T. Colborn, S. McMaster, R. Miller, J. Bantle, P. Campbell, N. Denslow, R. Dickerson, L. Folmar, M. Fry, J. Giesy, L. E. Gray, P. Guiney, T. Hutchinson, S. Kennedy, V. Kramer, G. LeBlanc, M. Mayes, A. Nimrod, R. Patino, R. Peterson, R. Purdy, R. Ringer, P. Thomas, L. Touart, G. Van der Kraak, and T. Zacharewski. 1998. Overview of a

- workshop on screening methods for detecting potential (anti-) estrogenic/androgenic chemicals in wildlife. *Environ. Toxicol. Chem.* 17:68-87 #664
- Ankley, G. T. and D. R. Mount. 1996. Retrospective analysis of the ecological risk of contaminant mixtures in aquatic sediments. *Hum. Ecol. Risk Assess.* 2:434-40 #601
- Ankley, G. T., G. J. Niemi, K. B. Lodge, H. J. Harris, D. L. Beaver, D. E. Tillitt, T. R. Schwartz, J. P. Giesy, P. D. Jones, and C. A. Hagley. 1993. Uptake of planar polychlorinated biphenyls and 2,3,7,8-substituted polychlorinated dibenzofurans and dibenzo-p-dioxins by birds nesting in the lower Fox River and Green Bay, Wisconsin, USA. *Arch. Environ. Contam. Toxicol.* 24:332-44 #492
- Ankley, G. T., G. S. Peterson, J. R. Amato, and J. J. Jenson. 1990. Evaluation of sucrose as an alternative to sodium chloride in the Microtox® assay: Comparison to fish and cladoceran tests with freshwater effluents. *Environ. Toxicol. Chem.* 9:1305-10 #405
- Ankley, G. T., G. S. Peterson, M. T. Lukasewycz, and D. A. Jensen. 1990. Characteristics of surfactants in toxicity identification evaluations. *Chemosphere.* 21:3-12 #406
- Ankley, G. T., G. L. Phipps, E. N. Leonard, D. A. Benoit, V. R. Mattson, P. A. Kosian, A. M. Cotter, J. R. Dierkes, D. J. Hansen, and J. D. Mahony. 1991. Acid-volatile sulfide as a factor mediating cadmium and nickel bioavailability in contaminated sediments. *Environ. Toxicol. Chem.* 10:1299-307 #441
- Ankley, G. T. and M. K. Schubauer-Berigan. 1995. Background and overview of current sediment toxicity identification evaluation procedures. *J. Aquat. Ecosys. Health.* 4:133-49 #554
- Ankley, G. T. and M. K. Schubauer-Berigan. 1994. Comparison of techniques for the isolation of sediment pore water for toxicity testing. *Arch. Environ. Contam. Toxicol.* 27:507-12 #525
- Ankley, G. T., M. K. Schubauer-Berigan, and J. R. Dierkes. 1996. Application of toxicity identification evaluation techniques to pore water from Buffalo River sediments. *J. Great Lakes Res.* 22:534-44 #602
- Ankley, G. T., M. K. Schubauer-Berigan, and J. R. Dierkes. 1991. Predicting the toxicity of bulk sediments to aquatic organisms with aqueous test fractions: Pore water vs. elutriate. *Environ. Toxicol. Chem.* 10:1359-66 #442
- Ankley, G. T., M. K. Schubauer-Berigan, and R. A. Hoke. 1992. Use of toxicity identification evaluation techniques to identify dredged material disposal options: A proposed approach. *Environ. Manage.* 16:1-6 #468
- Ankley, G. T., M. K. Schubauer-Berigan, and P. D. Monson. 1995. Influence of pH and hardness on toxicity of ammonia to the amphipod *Hyalella azteca*. *Can. J. Fish. Aquat. Sci.* 52:2078-83 #555
- Ankley, G. T., N. A. Thomas, D. M. Di Toro, D. J. Hansen, J. D. Mahony, W. J. Berry, R. C. Swartz, R. A. Hoke, A. W. Garrison, H. E. Allen, and C. S. Zarba. 1994. Assessing potential bioavailability of metals in sediments: A proposed approach. *Environ. Manage.* 18:331-37 #526
- Ankley, G. T., J. E. Tietge, D. L. DeFoe, K. M. Jensen, G. W. Holcombe, E. J. Durhan, and S. A. Diamond. 1998. Effects of ultraviolet light and methoprene on survival and development of *Rana pipiens*. *Environ. Toxicol. Chem.* 17:2530-2542 #691
- Ankley, G. T., J. E. Tietge, G. W. Holcombe, D. L. DeFoe, S. A. Diamond, K. M. Jensen, and S. J. Degitz. 2000. Effects of laboratory ultraviolet radiation and natural sunlight on survival and development of *Rana pipiens*. *Can. J. Zool.* 78:1092-100 #742
- Ankley, G. T., D. E. Tillitt, and J. P. Giesy. 1989. Maternal transfer of bioactive polychlorinated aromatic hydrocarbons in spawning chinook salmon (*Oncorhynchus tshawytscha*). *Mar. Environ. Res.* 28:231-34 #377
- Ankley, G. T., D. E. Tillitt, J. P. Giesy, P. D. Jones, and D. A. Verbrugge. 1991. Bioassay-derived 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents in PCB-containing extracts from the flesh and eggs of Lake Michigan chinook salmon (*Oncorhynchus tshawytscha*) and possible implications for reproduction. *Can. J. Fish. Aquat. Sci.* 48:1685-90 #443
- Ankley, G. T., D. E. Tillitt, J. W. Gooch, and J. P. Giesy. 1989. Hepatic enzyme systems as biochemical indicators of the effects of contaminants on reproduction of chinook salmon (*Oncorhynchus tshawytscha*). *Comp. Biochem. Physiol.* 94C:235-42 #378
- Ankley, G.T. 1996. Research for assessing the ecological risk of endocrine disruptors. SETAC News, 16(4):11-12. #1996-14
- Ankley, G.T. 1997. Session 5: Critical issues in ecological relevance: Laboratory vs. field measurement endpoints: A contaminated sediment perspective. In: *Ecological risk assessment of contaminated sediments*. C.G. Ingersoll, T. Dillon, G.R. Biddinger, eds. Pp. 115-122. SETAC Press,

Pensacola, FL. #1997-4

- Ankley, G.T. 2002. A short-term test method for assessing the reproductive toxicity of endocrine-disrupting chemicals using the fathead minnow (*Pimephales promelas*). EPA/600-R-01-067. National Health and Environmental Effects Research Laboratory, Mid-Continent Ecology Division, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #2002-2
- Ankley, G.T. and V.S. Blazer. 1988. Effects of diet on PCB-induced changes in xenobiotic metabolism in the liver of channel catfish (*Ictalurus punctatus*). *Can. J. Fish Aquat. Sci.* 45(1):132-137. #1988-2
- Ankley, G.T., S.P. Bradbury, J. Hermens, O.G. Mekenyan, and K.-E. Tollefson. 1997. Current approaches to the use of structure activity relationships (SARs) in identifying the hazards of endocrine modulating chemicals to wildlife. In: *SETAC-Europe/OECD/EC Expert Workshop on Endocrine Modulators and Wildlife: Assessment and Testing*, April 10-13, 1997, Veldhoven, The Netherlands. L. Tattersfield, P. Matthiessen, P. Campbell, N. Grandy, and R. Länge, eds. Pp. 19-40. SETAC Press, Pensacola, FL. #1997-9
- Ankley, G.T., L.P. Burkhard, P.M. Cook, S.A. Diamond, R.J. Erickson, and D.R. Mount. 2003. Assessing risks from photoactivated toxicity of PAHs to aquatic organisms. In: *PAHS: An Ecotoxicological Perspective*. Douben, P.E.T., ed. pp. 275-296. John Wiley & Sons, Ltd. New York, NY. #2003-2
- Ankley, G.T. and J.P. Giesy. 1998. Endocrine disruptors in wildlife: a weight-of-evidence perspective. In: *Principles and processes for evaluating endocrine disruption in wildlife*. R. Kendall, R. Dickerson, J. Giesy and W. Suk, eds. Pp. 349-367. SETAC Press, Pensacola, FL. #1998-1
- Ankley, G.T., E. Leonard, G. Glass, D. Call, P. Kosian, A. Cotter, and J. Dierkes. 1990. Chemical and biological assessment of sediments from Oswego Harbor, 1990. Final report to U.S. Army Corps of Engineers, Buffalo District. U.S. Environmental Protection Agency, Duluth, MN; University of Wisconsin-Superior, Superior, WI; and ASCL Corporation, Duluth, MN. #1990-19
- Ankley, G.T. and N.A. Thomas. 1992. Interstitial water toxicity identification evaluation approach. In: *Sediment classification methods compendium*. Pp. 5.1-5.14. EPA 823-R-92-006. U.S. Environmental Protection Agency, Washington, D.C. #1992-20
- Ankley, G. T.; Schubauer-Berigan, M. K.; Dierkes, J. R., and Lukasewycz, M. T. Sediment toxicity identification evaluation: phase I (characterization), phase II (identification) and phase III (confirmation) modifications of effluent procedures. EPA 600/6-91/007. National Effluent Toxicity Assessment Center.
- Ankley, G. T., et al. A short-term test method for assessing the reproductive toxicity of endocrine-disrupting chemicals using the fathead minnow (*Pimephales promelas*). EPA 600/R-01/067. National Health and Environmental Effects Research Laboratory, Mid-Continent Ecology Division, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Ankley, G. T., et al. Methods for measuring the toxicity and bioaccumulation of sediment-associated contaminants with freshwater invertebrates. EPA 600/R-99/064. Mid-Continent Ecology Division, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN and Office of Science and Technology, Office of Water, U.S. Environmental Protection Agency, Washington, DC.
- Armitage, B. J.; Forsythe, T. D.; Rodgers, E. B., and Wrenn, W. B. Browns Ferry Biothermal Research Series. I. Colonization by periphyton, zooplankton, and macro invertebrates. EPA 600/3-78/020. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, TV-35013A. Project officers: T.H. Ripley/K.E. Biesinger
- Arthur, J. W. 1988. Application of laboratory-derived criteria to an outdoor stream ecosystem. *Int. J. Environ. Stud.* 32:97-110 #360
- Arthur, J. W. 1970. Chronic effects of linear alkylate sulfonate detergent on *Gammarus pseudolimnaeus*, *Campeloma decisum* and *Physa integra*. *Water Res.* 4:251-57 #36
- Arthur, J. W. and J. G. Eaton. 1971. Chloramine toxicity to the amphipod *Gammarus pseudolimnaeus* and the fathead minnow (*Pimephales promelas*). *J. Fish. Res. Board Can.* 28:1841-45 #49
- Arthur, J. W. and W. B. Horning II. 1969. The use of artificial substrates in pollution surveys. *Am. Midl. Nat.* 82:83-89 #22
- Arthur, J. W., A. E. Lemke, V. R. Mattson, and B. J. Halligan. 1974. Toxicity of sodium nitrilotriacetate (NTA) to the fathead minnow and an amphipod in soft water. *Water Res.* 8:187-93 #98
- Arthur, J. W. and E. N. Leonard. 1970. Effects of copper on *Gammarus pseudolimnaeus*, *Physa integra*, and *Campeloma decisum* in soft water. *J. Fish. Res. Board Can.* 27:1277-83 #37

- Arthur, J. W., C. W. West, K. N. Allen, and S. F. Hettke. 1987. Seasonal toxicity of ammonia to five fish and nine invertebrate species. *Bull. Environ. Contam. Toxicol.* 38:324-31 #335
- Arthur, J. W., J. A. Zischke, K. N. Allen, and R. O. Hermanutz. 1983. Effects of diazinon on macroinvertebrates and insect emergence in outdoor experimental channels. *Aquat. Toxicol.* 4:283-301 #256
- Arthur, J. W., J. A. Zischke, and G. L. Erickson. 1982. Effect of elevated water temperature on macroinvertebrate communities in outdoor experimental channels. *Water Res.* 16:1465-77 #233
- Arthur, J.W. 1980. Review of freshwater bioassay procedures for selected amphipods. In: *Aquatic invertebrate bioassays*. A.L. Buikema, Jr. and J. Cairns, Jr., eds. Pp. 98-108. ASTM STP 715. American Society for Testing and Materials, Philadelphia, PA. #1980-14
- Arthur, J.W., A. Katko, H.W. Read, and C.T. Walbridge. 1989. Ambient toxicity assessments in the upper Illinois River basin. Interim report. Internal report EPA 600/x89-089. U.S. Environmental Protection Agency, Duluth, MN. #1989-27
- Arthur, J.W., T. Roush, A.R. Carlson, and C.T. Walbridge. 1993. Application of integrative procedures to evaluate Iowa watershed quality. In: *Agricultural research to protect water quality*. Proceedings, February 21-24, 1993, Minneapolis, MN. Pp. 137-139. Soil and Water Conservation Society, Ankeny, IA. #1993-16
- Arthur, J.W., T. Roush, J.A. Thompson, F.A. Puglisi, C. Richards, G.E. Host, and L.B. Johnson. 1996. Evaluation of watershed quality in the Saginaw River basin. EPA 600/R-95-153. Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-6
- Arthur, J. W.; Andrew, R. W.; Mattson, V. R.; Olson, D. T.; Glass, G. E.; Halligan, B. J., and Walbridge, C. T. Comparative toxicity of sewage-effluent disinfection to freshwater aquatic life. EPA 600/3-75-012. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Arthur, J. W.; Roush, T.; Thompson, J. A.; Walbridge, C. T., and Puglisi, F. A. Evaluation of low order stream quality in central Iowa. EPA 600/R-97-009. Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Arthur, J. W. and Zischke, J. A. Evaluation of watershed quality in the Minnesota River basin. EPA 600/R-94-143. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Askegaard, T. and M. Balcer. 1993. Diet analysis of young-of-the-year rainbow smelt from Saginaw Bay. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1993-19
- Auer, M.T. and N.A. Auer. 1990. Chemical suitability of substrates for walleye egg development in the lower Fox River, Wisconsin. *Trans. Am. Fish. Soc.* 119:871-876. #1990-8
- Auer, M.T., J.M. Graham, L.E. Graham, and J.A. Kranzfelder. 1983. Factors regulating the spatial and temporal distribution of *Cladophora* and *Ulothrix* in the Laurentian Great Lakes. In: *Periphyton of freshwater ecosystems*. Wetzel, R.G., ed. Dr W. Junk Publishers, The Hague. Pp. 135-144. #1983-8
- Auer, M.T., M.S. Kieser, and R.P. Canale. 1986. Identification of critical nutrient levels through field verification of models for phosphorus and phytoplankton growth. *Can. J. Fish. Aquat. Sci.* 43:379-388. #1986-16
- Auer, N.A. and M.T. Auer. 1987. Field evaluation of barriers to walleye egg and larva survival in the lower Fox River, Wisconsin. *American Fisheries Society Symposium* 2:93-101. #1987-21
- Aulerich, R. J. and Ringer, R. K. Toxicity of the polychlorinated biphenyl Aroclor 1016 to mink. EPA 600/3-80/033. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 68-03-1187. Project officer: G.D. Veith
- B
- Babeu, L. and D.D. Vaishnav. 1987. Prediction of biodegradability for selected organic chemicals. *Journal of Industrial Microbiology* 2:107-115. #1987-12
- Bahnick, D., C. P. Sauer, B. C. Butterworth, and D. W. Kuehl. 1994. A national study of mercury contamination in fish IV: Analytical methods and results. *Chemosphere*. 29:537-46 #527
- Bahnick, D. A.; Swenson, W. A.; Markee, T. P.; Call, D. J.; Anderson, C. A., and Morris, R. T. Development of bioassay procedures for defining pollution of harbor sediments. Part I. (Final

- report). EPA 600/3-81/025. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB81-178261). Project officer: R. Anderson
- Bahnick, D.A., W.A. Swenson, T.P. Markee, D.J. Call, C.A. Anderson, and R.T. Morris. 197? Development of bioassay procedures for defining pollution of harbor sediments, part I. Final report, Project #R804918-01. Center for Lake Superior Environmental Studies, University of Wisconsin, Superior, WI. #197?-6
- Baker, J.E., P.D. Capel, and S.J. Eisenreich. 1986. Influence of colloids on sediment-water partition coefficients of polychlorobiphenyl congeners in natural waters. *Environ. Sci. Technol.* 20(11):1136-1143. #1986-14
- Balcer, M.D., D.J. McCauley, G.J. Niemi, and L.T. Brooke. 1986. Ecological assessment of factors affecting walleye ova survival in the lower Fox River. Final report, Cooperative Agreement #CR-811723-02-0, submitted to U.S. Environmental Protection Agency, Duluth, MN by Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1986-2
- Baldacci, R., A. Roda, and R.S. Pearlman. 1989. A theoretical model for the critical micelle concentration of bile salts. *Journal of Solution Chemistry* 18(4):355-367. #1989-55
- Bandiera S., S. Safe, and A.B. Okey. 1982. Binding of polychlorinated biphenyls classified as either phenobarbitone-, 3-methylcholanthrene- or mixed-type inducers to cytosolic Ah receptor. *Chem.-Biol. Interactions* 39:259-277. #1982-10
- Banner, A. and Van Arman, J. A. Thermal effects on eggs, larvae and juveniles of bluegill sunfish. EPA R3-73-041. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Contract # 14-12-913 Project 18050 GAB. Project officer: K.E.F. Hokanson
- Bannerman, R. T.; Armstrong, D. E.; Harris, R. F., and Holdren, G. C. Phosphorus uptake and release by Lake Ontario sediments. EPA 660/3-75/006. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant # 800609. Project officer: T.T. Davies
- Baril, S. F.; Luedtke, R. J., and Roemhild, G. R. Environmental effects of western coal combustion. Part II - The aquatic macro invertebrates of Rosebud Creek, Montana. EPA 600/3-78/099. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Barnidge, D., D. Brooke, G. Elonen, M. Hoglund, M. Kahl, G. Mielke, and J. Thompson. 1990. Toxicity of eight terpenes to fathead minnow (*Pimephales promelas*), daphnids (*Daphnia magna*), and algae (*Selanasturm capricornutum*). Unpublished report, Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1990-1
- Bartell, S.M. 1988. Community and ecosystem models for ecological risk assessment - White paper. EPA 600/x-88-109. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-47
- Bartone, C.R. and C.L. Schelske. 1982. Lake-wide seasonal changes in limnological conditions in Lake Michigan in 1976. *J. Great Lakes Res.* 8(3):413-427. #1982-9
- Bartsch, A.F. and D.I. Mount. 197? Thermal effects on ecological systems. Unpublished report, National Water Quality Laboratory, Federal Water Pollution Control Administration, Duluth, MN. #197?-7
- Basak, S.C., S. Bertelsen, and G.D. Grunwald. 1994. Application of graph theoretical parameters in quantifying molecular similarity and structure-activity relationships. *Journal of Chemical Information and Computer Sciences* 34:270-276. #1994-3
- Basak, S.C., G.D. Grunwald, G.E. Host, G.J. Niemi, and S.P. Bradbury. 1998. A comparative study of molecular similarity, statistical, and neural methods for predicting toxic modes of action. *Environ. Toxicol. Chem.*, 17(6):1056-1064. #1998-12
- Basak, S. C., G. J. Niemi, and G. D. Veith. 1990. Optimal characterization of structure for prediction of properties. *J. Math. Chem.* 4:185-205 #407
- Basch, R. E.; Pecor, C. H.; Waybrant, R. C., and Kenaga, D. E. Limnology of Michigan's near shore waters of Lakes Superior and Huron. EPA 600/3-80/059. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN and Great Lakes National Program Office, Region V, U.S. Environmental Protection Agency, Chicago, IL, R005146-01. Project officer: N.A. Thomas
- Basch, R. E. and Truchan, J. G. Toxicity of chlorinated power plant condenser cooling waters to fish. EPA 600/3-76/009. Environmental Research Laboratory, Office of Research and Development, U.S.

- Environmental Protection Agency, Duluth, MN, Grant # R-800700. Project officer: J.W. Arthur Bathelt, R.W. and C.L. Schelske. 1983. Degradation of the peritrophic membrane of fresh-water zooplankton fecal pellets. *Trans. Am. Microsc. Soc.* 102(3):288-299. #1983-6
- Batterman, A. R., S. L. Batterman, K. M. Jensen, and F. W. Whiteman. 1999. Data quality objectives in environmental research planning. *Quality Assurance*. 7:181-94 #752
- Batterman, A. R. and P. M. Cook. 1981. Determination of mineral fiber concentrations in fish tissues. *Can. J. Fish. Aquat. Sci.* 38:952-59 #214
- Batterman, A. R., P. M. Cook, K. B. Lodge, D. B. Lothenbach, and B. C. Butterworth. 1989. Methodology used for a laboratory determination of relative contributions of water, sediment and food chain routes of uptake for 2,3,7,8-TCDD bioaccumulation by lake trout in Lake Ontario. *Chemosphere*. 19:451-58 #379
- Bauer, C.F. and A.W. Andren. 1988. Variability of particulate trace element emissions from the Columbia coal-fired power plant, Portage, Wisconsin. *The Science of the Total Environment* 68:251-266. #1988-29
- Beaver, D.L. and P.E. Lederle. 1989. Green Bay tree swallow study. Final report submitted to U.S. Environmental Protection Agency, Duluth, MN. #1989-3
- Beder-Miller, S.E. and R.L. Spehar. 1988. Manual for the Aquatic Toxicity Test Analysis System (ATTAS), draft. Draft report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-42
- Bedford, B. and O.L. Loucks. 1984. Response of Carex-dominated wetlands to altered temperature and flooding patterns. EPA-600/S3-83-081. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-17
- Bedford, B. and O.L. Loucks. 1984. Response of Carex-dominated wetlands to altered temperature and flooding patterns: Project Summary. EPA-600/S3-83/081. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-17
- Bedford, K.W. and M. Abdelrhman. 1987. Analytical and experimental studies of the benthic boundary layer and their applicability to near-bottom transport in Lake Erie. *J. Great Lakes Res.* 13(4):628-648. #1987-11
- Bedford, K.W., G. Koltun, O. Wai, C.M. Libicki, and R.V. Evra. 1988. A stochastic/deterministic methodology for estimating resuspension potential and risk and its application to the Trenton Channel of the Detroit River (Appendix H). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. R.G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix H. #1988-4
- Beeton, A. M.; Kovacic, P. K., and Brooks, A. S. Effects of chlorine and sulfite reduction on Lake Michigan invertebrates. EPA 600/3-76/036. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R-801035-01. Project officer: D.T. Olson
- Bell, H. L. 1971. Effect of low pH on the survival and emergence of aquatic insects. *Water Res.* 5:313-19 #50
- Bell, H. L. 1970. Effects of pH on the life cycle of the midge *Tanytarsus dissimilis*. *Can. Entomol.* 102:636-39 #38
- Bell, H. L. and A. V. Nebeker. 1969. Preliminary studies on the tolerance of aquatic insects to low pH. *J. Kans. Entomol. Soc.* 42:230-236 #24
- Bengtsson, B.E., T.J. Norberg-King, and D.I. Mount, eds. 1987. Effluent and ambient toxicity testing in the Gota Alv and Viskan Rivers, Sweden: A U.S.-Swedish OECD Cooperative Project. Naturvardsverket Rapport 3275. Naturvardsverket, Solna, Sweden. #1987-35
- Benoit, D. A. 1974. Artificial laboratory spawning substrate for brook trout (*Salvelinus fontinalis* Mitchell). *Trans. Am. Fish. Soc.* 103:144-45 #99
- Benoit, D. A. 1975. Chronic effects of copper on survival, growth, and reproduction of the bluegill (*Lepomis macrochirus*). *Trans. Am. Fish. Soc.* 104:353-58 #115
- Benoit, D. A. 1968. Nutrition study for maintaining yellow perch fingerlings in the laboratory. *Prog. Fish Cult.* 30:234 #15
- Benoit, D. A. 1976. Toxic effects of hexavalent chromium on brook trout (*Salvelinus fontinalis*) and

- rainbow trout (*Salmo gairdneri*). *Water Res.* 10:497-500 #127
- Benoit, D. A. and R. W. Carlson. 1977. Spawning success of fathead minnows on selected artificial substrates. *Prog. Fish-Cult.* 39:67-69 #141
- Benoit, D. A. and G. W. Holcombe. 1978. Toxic effects of zinc on fathead minnows *Pimephales promelas* in soft water. *J. Fish Biol.* 13:701-8 #165
- Benoit, D. A., E. N. Leonard, G. M. Christensen, and J. T. Fiandt. 1976. Toxic effects of cadmium on three generations of brook trout (*Salvelinus fontinalis*). *Trans. Am. Fish. Soc.* 105:550-560 #128
- Benoit, D. A., V. R. Mattson, and D. L. Olson. 1982. A continuous-flow mini-diluter system for toxicity testing. *Water Res.* 16:457-64 #234
- Benoit, D. A., G. L. Phipps, and G. T. Ankley. 1993. A sediment testing intermittent renewal system for the automated renewal of overlying water in toxicity tests with contaminated sediments. *Water Res.* 27:1403-12 #493
- Benoit, D. A. and F. A. Puglisi. 1973. A simplified flow-splitting chamber and siphon for proportional diluters. *Water Res.* 7:1915-16 #79
- Benoit, D. A., F. A. Puglisi, and D. L. Olson. 1982. A fathead minnow *Pimephales promelas* early life stage toxicity test method evaluation and exposure to four organic chemicals. *Environ. Pollut. Ser. A.* 28:189-97 #235
- Benoit, D. A., P. K. Sibley, J. L. Juenemann, and G. T. Ankley. 1997. *Chironomus tentans* life-cycle test: Design and evaluation for use in assessing toxicity of contaminated sediments. *Environ. Toxicol. Chem.* 16:1165-76 #647
- Benoit, D.A. 1971. An evaluation of current procedures used in aquatic toxicology. Presented before the American Association for the Advancement of Science, American Fisheries Society Symposium on Heavy Metals as an Environmental Hazard to Fish, Birds, and Man, December, 1971, Philadelphia, PA. #1971-1
- Benoit, D. A., R. F. Syrett, and J. G. Hale. 1969. Automatic live brine shrimp feeder. *Trans. Am. Fish. Soc.* 98:532-33 #25
- Benoit, D.A., R.F. Syrett, and F.B. Freeman. 1981. Manual for construction of a continuous-flow mini-diluter system for toxicity testing. National Water Quality Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1981-1
- Benoit, D. A. User's guide for conducting life-cycle chronic toxicity tests with fathead minnows (*Pimephales promelas*). EPA 600/8-81/011. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Benoit, D. A.; Holcombe, G. W., and Spehar, R. L. Guidelines for conducting early life stage toxicity tests with Japanese medaka (*Oryzias latipes*). EPA 600/3-91-063. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Berg, D.J., S.W. Fisher, and P.F. Landrum. 1996. Clearance and processing of algal particles by zebra mussels (*Dreissena polymorpha*). *J. Great Lakes Res.*, 22(3):779-788. #1996-25
- Berry, W. J.; Burgess, R. M.; Hansen, D. J.; Di Toro, D. M.; DeRosa, L. D.; Bell, H. E.; Reiley, M. C.; Stancil, F. E., Jr.; Zarba, C. S.; Mount, D. R., and Spehar, R. L. Procedures for the derivation of equilibrium partitioning sediment benchmarks (ESBs) for the protection of benthic organisms: Endrin. EPA 600/R-02/009. National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division/Mid-Continent Ecology Division, Office of Research and Development, U.S. Environmental Protection Agency, Narragansett, RI/Duluth, MN.
- Berry, W. J.; Burgess, R. M.; Hansen, D. J.; DiToro, D. M.; DeRosa, L. D.; Bell, H. E.; Reiley, M. C.; Stancil, F. E., Jr.; Zarba, C. S.; Mount, D. R., and Spehar, R. L. Procedures for the derivation of equilibrium partitioning sediment benchmarks (ESBs) for the protection of benthic organisms: Dieldrin. EPA 600/R-02/010. National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division/Mid-Continent Ecology Division, Office of Research and Development, U.S. Environmental Protection Agency, Narragansett, RI/Duluth, MN.
- Bertelsen, S. L., A. D. Hoffman, C. A. Gallinat, C. M. Elonen, and J. W. Nichols. 1998. Evaluation of log K_{ow} and tissue lipid content as predictors of chemical partitioning to fish tissues. *Environ. Toxicol. Chem.* 17:1447-55 #684
- Besser, J. M., C. G. Ingersoll, E. N. Leonard, and D. R. Mount. 1998. Effect of zeolite on toxicity of ammonia in freshwater sediments: implications for toxicity identification evaluation procedures. *Environ. Toxicol. Chem.* 17:2310-2317 #726

- Bierman, V.J., Jr., J.V. DePinto, T.C. Young, P.W. Rodgers, and S.C. Martin. 1992. Development and validation of an integrated exposure model for toxic chemicals in Green Bay, Lake Michigan. First draft of final report to Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #1992-28
- Bierman, V.J., Jr., D.W. Dilks, T.J. Feist, J.V. DePinto, and R.G. Kreis, Jr. 1998. Coupled phytoplankton-zebra mussel model for Saginaw Bay, Lake Huron. In: *Proceedings of the Workshop on Aquatic Ecosystem Modeling and Assessment Techniques for Application within the U.S. Army Corps of Engineers*. Waide, J.B. and Gandy, L.M., comps., pp. 43-67, U.S. Army Corps of Engineer, Washington, DC . #1998-8
- Bierman, V.J., Jr. and D.M. Dolan. 1986. Modeling of phytoplankton in Saginaw Bay: I. Calibration phase. *Journal of Environmental Engineering* 112(2):400-429. #1986-9
- Bierman, V. J., Jr. and D. M. Dolan. 1981. Modeling of phytoplankton-nutrient dynamics in Saginaw Bay, Lake Huron. *J. Great Lakes Res.* 7:409-39 #215
- Bierman, V.J., Jr., D.M. Dolan, E.F. Stoermer, J.E. Gannon, and V.E. Smith. 1980. The development and calibration of a spatially simplified multi-class phytoplankton model for Saginaw Bay, Lake Huron. *Great Lakes Environmental Planning Study (GLEPS) Contribution No. 33*. #1980-1
- Bierman, V. J., Jr. and McIlroy, L. M. User manual for two-dimensional multi-class phytoplankton model with internal nutrient pool kinetics. EPA 600/3-86-061. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Biesinger, K. E., L. E. Anderson, and J. G. Eaton. 1982. Chronic effects of inorganic and organic mercury on *Daphnia magna*: Toxicity, accumulation, and loss. *Arch. Environ. Contam. Toxicol.* 11:769-74 #236
- Biesinger, K. E., R. W. Andrew, and J. W. Arthur. 1974. Chronic toxicity of NTA (nitrilotriacetate) and metal-NTA complexes to *Daphnia magna*. *J. Fish. Res. Board Can.* 31:486-90 #100
- Biesinger, K. E. and G. M. Christensen. 1972. Effects of various metals on survival, growth, reproduction, and metabolism of *Daphnia magna*. *J. Fish. Res. Board Can.* 29:1691-700 #62
- Biesinger, K. E., G. M. Christensen, and J. T. Fiandt. 1986. Effects of metal salt mixtures on *Daphnia magna* reproduction. *Ecotoxicol. Environ. Saf.* 11:9-14 #309
- Biesinger, K. E., A. E. Lemke, W. E. Smith, and R. M. Tyo. 1976. Comparative toxicity of polyelectrolytes to selected aquatic animals. *J. Water Pollut. Control Fed.* 48:183-87 #129
- Biesinger, K. E. and G. N. Stokes. 1986. Effects of synthetic polyelectrolytes on selected aquatic organisms. *J. Water Pollut. Control Fed.* 58:207-13 #310
- Biesinger, K.E. 1971. Suggestions on water quality standards for the state of Washington. Unpublished memorandum. National Water Quality Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1971-2
- Biesinger, K.E. 1986. Summary Report of research conducted on the Lower Fox River by staff of the Environmental Research Laboratory-Duluth, and by personnel on cooperative agreements. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1986-35
- Biesinger, K.E. and W.L. Hartman. 197? The limnetic zooplankton of lakes producing sockeye salmon (*Oncorhynchus nerka*) in southwestern Alaska. Unpublished report. #197?-5
- Biesinger, K. E.; Williams, L. R., and van der Schalie, W. H. Procedures for conducting *Daphnia magna* toxicity bioassays. EPA 600/8-87-011. Environmental Monitoring Systems Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Las Vegas, NV.
- Biesinger, K. E.; Brown, R. P.; Bernick, C. R.; Flittner, G. A., and Hokanson, K. E. F. A national compendium of freshwater fish and water temperature data. Volume I - Data management techniques, output examples and limitations. EPA 600/3-79/056. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950.
- Black, J.J., A.E. Maccubbin, and C.J. Johnston. 1988. Carcinogenicity of benzo[a]pyrene in rainbow trout resulting from embryo microinjection. *Aquatic Toxicology* 13:297-308. #1988-16
- Black, J.J., A.E. Maccubbin, H.K. Myers, and R.F. Zeigel. 1988. Aflatoxin B1 induced hepatic neoplasia in Great Lakes coho salmon. *Bull. Environ. Contam. Toxicol.* 41:742-745. #1988-24
- Black, J.J., A.E. Maccubbin, and M. Schiffert. 1985. A reliable, efficient, microinjection apparatus and methodology for the in vivo exposure of rainbow trout and salmon embryos to chemical carcinogens. *Journal of the National Cancer Institute* 75(6):1123-1128. #1985-11

- Blazer, V. S., G. T. Ankley, and D. Finco-Kent. 1989. Dietary influences on disease resistance factors in channel catfish. *Dev. Comp. Immunol.* 13:43-48 #380
- Bott, T.; Patrick, R.; Larson, R., and Rhyne, C. The effect of nitrilotriacetic acid (NTA) on the structure and functioning of aquatic communities in streams. EPA 600/3-80/050. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R801951. Project officer: J.K. Crawford
- Bouck, G. R. 1972. Effects of diurnal hypoxia on electrophoretic protein fractions and other health parameters of rock bass (*Ambloplites rupestris*). *Trans. Am. Fish. Soc.* 101:488-93 #63
- Bouck, G. R.; Nebeker, A. V., and Stevens, D. G. Mortality, saltwater adaptation and reproduction of fish during gas supersaturation. EPA 600/3-76/050. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Bradbury, S. P. 1995. Ecological risk assessment for chemical stressors: Challenges in predictive ecotoxicology research. *Aust. J. Ecotox.* 1:3-9 #556
- Bradbury, S. P. 1994. Predicting modes of toxic action from chemical structure: An overview. *SAR and QSAR in Environ. Res.* 2:89-104 #528
- Bradbury, S. P. 1995. Quantitative structure-activity relationships and ecological risk assessment: An overview of predictive aquatic toxicology research. *Toxicol. Lett.* 79:229-37 #557
- Bradbury, S. P., R. W. Carlson, G. J. Niemi, and T. R. Henry. 1991. Use of respiratory-cardiovascular responses of rainbow trout (*Oncorhynchus mykiss*) in identifying acute toxicity syndromes in fish: Part 4. Central nervous system seizure agents. *Environ. Toxicol. Chem.* 10:115-31 #444
- Bradbury, S. P. and G. M. Christensen. 1991. Inhibition of alcohol dehydrogenase activity by acetylenic and allylic alcohols: Concordance with in vivo electrophile reactivity in fish. *Environ. Toxicol. Chem.* 10:1155-60 #445
- Bradbury, S. P. and J. R. Coats. 1989. Comparative toxicology of the pyrethroid insecticides. *Rev. Environ. Contam. Toxicol.* 108:133-77 #381
- Bradbury, S. P. and J. R. Coats. 1989. Toxicokinetics and toxicodynamics of pyrethroid insecticides in fish. *Environ. Toxicol. Chem.* 8:373-80 #382
- Bradbury, S. P., J. R. Coats, and J. M. McKim. 1985. Differential toxicity and uptake of two fenvalerate formulations in fathead minnows (*Pimephales promelas*). *Environ. Toxicol. Chem.* 4:533-41 #291
- Bradbury, S. P., J. R. Coats, and J. M. McKim. 1986. Toxicokinetics of fenvalerate in rainbow trout (*Salmo gairdneri*). *Environ. Toxicol. Chem.* 5:567-76 #311
- Bradbury, S. P., J. M. Dady, P. N. Fitzsimmons, M. M. Voit, D. E. Hammermeister, and R. J. Erickson. 1993. Toxicokinetics and metabolism of aniline and 4-chloroaniline in medaka (*Oryzias latipes*). *Toxicol. Appl. Pharmacol.* 118:205-14 #494
- Bradbury, S. P., T. R. Henry, G. J. Niemi, R. W. Carlson, and V. M. Snarski. 1989. Use of respiratory-cardiovascular responses of rainbow trout (*Salmo gairdneri*) in identifying acute toxicity syndromes in fish: Part 3. Polar narcotics. *Environ. Toxicol. Chem.* 8:247-61 #383
- Bradbury, S., V. Kamenska, P. Schmieder, G. T. Ankley, and O. Mekenyany. 2000. A computationally based identification algorithm for estrogen receptor ligands: Part. 1. Predicting hER α binding affinity. *Toxicological Sciences*. 58:253-69 #750
- Bradbury, S. P. and R. L. Lipnick. 1990. Introduction: Structural properties for determining mechanisms of toxic action. *Environ. Health Perspect.* 87:181-82 #408
- Bradbury, S. P., J. M. McKim, and J. R. Coats. 1987. Physiological response of rainbow trout (*Salmo gairdneri*) to acute fenvalerate intoxication. *Pestic. Biochem. Physiol.* 27:275-88 #336
- Bradbury, S. P., O. G. Mekenyany, and G. T. Ankley. 1996. Quantitative structure-activity relationships for polychlorinated hydroxybiphenyl estrogen receptor binding affinity: An assessment of conformer flexibility. *Environ. Toxicol. Chem.* 15:1945-54 #603
- Bradbury, S. P., O. G. Mekenyany, and G. T. Ankley. 1998. The role of ligand flexibility in predicting biological activity: Structure-activity relationships for aryl hydrocarbon, estrogen, and androgen receptor binding affinity. *Environ. Toxicol. Chem.* 17:15-25 #665
- Bradbury, S. P., O. G. Mekenyany, G. D. Veith, and N. Zaharieva. 1995. SAR models for futile metabolism: One-electron reduction of quinones, phenols and nitrobenzenes. *SAR and QSAR in Environ. Res.* 4:109-24 #558
- Bradbury, S. P., C. L. Russom, G. T. Ankley, T. W. Schultz, and J. D. Walker. 2003. Overview of data and conceptual approaches for derivation of quantitative structure-activity relationships for ecotoxicological effects of organic chemicals. *Environ. Toxicol. Chem.* 22:1789-98 #796

- Bradbury, S. P., D. M. Symonik, J. R. Coats, and G. J. Atchison. 1987. Toxicity of fenvalerate and its constituent isomers to the fathead minnow, *Pimephales promelas*, and bluegill, *Lepomis macrochirus*. *Bull. Environ. Contam. Toxicol.* 38:727-35 #337
- Bradbury, S., C. Russom, and G. Veith. 1992. Report on prototype expert system to predict toxic mechanism from chemical structure. Unpublished report. Environmental Research Laboratory, Office of Environmental Processes and Effects Research, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1992-31
- Bradbury, S.P. 1996. 2,3,7,8-tetrachlorodibenzo-p-dioxin. In: *Noninfectious diseases of wildlife*. A. Fairbrother, L.N. Locke, and G.L. Hoff, eds. Pp. 87-98. Iowa State University Press, Ames, IA. #1996-3
- Bradbury, S.P. and R.W. Carlson. 1990. Predictive toxicology in risk assessment: Approaches in predicting mechanisms of toxic action from chemical structure. Internal report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1990-28
- Bradbury, S.P., R.W. Carlson, and T.R. Henry. 1989. Polar narcosis in aquatic organisms. In: *Aquatic toxicology and hazard assessment*, 12th vol. U.M. Cowgill and L.R. Williams, eds. Pp. 59-73. ASTM STP 1027. American Society for Testing and Materials, Philadelphia, PA. #1989-34
- Bradbury, S.P., T.R. Henry, and R.W. Carlson. 1990. Fish acute toxicity syndromes in the development of mechanism-specific QSARS. In: *Practical applications of quantitative structure-activity relationships (QSAR) in environmental chemistry and toxicology*. W. Karcher and J. Devillers, eds. Pp. 295-315. Kluwer Academic, Boston, MA. #1990-11
- Brauhn, J. L. and Schoettger, R. A. Acquisition and culture of research fish : rainbow trout, fathead minnows, channel catfish, and bluegills. EPA 660/3-75/011. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, EPA IAG 141(D). Project officer: L.H. Mueller
- Brazner, J. C. 1997. Regional, habitat, and human development influences on coastal wetland and beach fish assemblages in Green Bay, Lake Michigan. *J. Great Lakes Res.* 23:36-51 #646
- Brazner, J. C. and R. L. Anderson. 1986. Ingestion and adsorption of *Bacillus thuringiensis* subsp. *israelensis* by *Gammarus lacustris* in the laboratory. *Appl. Environ. Microbiol.* 52:1386-90 #312
- Brazner, J. C. and E. W. Beals. 1997. Patterns in fish assemblages from coastal wetland and beach habitats in Green Bay, Lake Michigan: A multivariate analysis of abiotic and biotic forcing factors. *Can. J. Fish. Aquat. Sci.* 54:1743-61 #661
- Brazner, J. C., S. E. Campana, and D. K. Tanner. 2004. Habitat fingerprints for Lake Superior coastal wetlands derived from elemental analysis of yellow perch otoliths. *Trans. Am. Fish. Soc.* 133:692-704 #824
- Brazner, J. C. and W. M. DeVita. 1998. PCB's, DDE, and Mercury in young-of-the-year littoral fishes from Green Bay, Lake Michigan. *J. Great Lakes Res.* 24:83-92 #673
- Brazner, J. C., L. J. Heinis, and D. A. Jensen. 1989. A littoral enclosure for replicated field experiments. *Environ. Toxicol. Chem.* 8:1209-16 #384
- Brazner, J. C. and D. A. Jensen. 2000. Zebra mussel [*Dreissena polymorpha* (Pallas)] colonization of rusty crayfish [*Orconectes rusticus* (Girard)] in Green Bay, Lake Michigan. *Am. Midl. Nat.* 143:250-256 #727
- Brazner, J. C. and E. R. Kline. 1990. Effects of chlorpyrifos on the diet and growth of larval fathead minnows (*Pimephales promelas*) in littoral enclosures. *Can. J. Fish. Aquat. Sci.* 47:1157-65 #409
- Brazner, J. C. and J. J. Magnuson. 1994. Patterns of fish species richness and abundance in coastal marshes and other nearshore habitats in Green Bay, Lake Michigan. *Verh. Internat. Verein. Limnol.* 25:2098-104 #529
- Brazner, J. C., M. E. Sierszen, J. R. Keough, and D. K. Tanner. 2000. Assessing the ecological importance of coastal wetlands in a large lake context. *Verh. Internat. Verein. Limnol.* 27:1950-1961 #766
- Brazner, J. C., D. K. Tanner, D. A. Jensen, and A. Lemke. 1998. Relative abundance and distribution of Ruffe (*Gymnocephalus cernuus*) in a Lake Superior coastal wetland fish assemblage. *J. Great Lakes Res.* 24:293-303 #682
- Brazner, J. C., D. K. Tanner, and J. A. Morrice. 2001. Fish-mediated nutrient and energy exchange between a Lake Superior coastal wetland and its adjacent bay. *J. Great Lakes Res.* 27:98-111 #756

- Brazner, J.C., S. Lozano, M.L. Knuth, S.L. Bertelsen, L.J. Heinis, D.A. Jensen, E.R. Kline, S.L. O'Halloran, K.W. Sargent, D.K. Tanner, and R.E. Siefert. 1988. The effects of chlorpyrifos on a natural aquatic system: A research design for littoral enclosure studies and final research report. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-1
- Breidenbach, A.W., C.G. Gunnerson, F.K. Kawahara, J.J. Lichtenberg, and R.S. Green. 1966. Chlorinated hydrocarbon pesticides in major river basins, 1957-1965. Basic Data Program, Federal Water Pollution Control Administration, U.S. Dept. of the Interior, Washington, DC. #1966-5
- Breneman, D., C. Richards, and S. Lozano. 2000. Environmental influences on benthic community structure in a Great Lakes embayment. *J. Great Lakes Res.*, 26(3):287-304. #2000-7
- Brezonik, P. L., L. A. Baker, J. G. Eaton, T. M. Frost, P. J. Garrison, T. K. Kratz, J. J. Magnuson, W. J. Rose, B. K. Shephard, W. A. Swenson, C. J. Watras, and K. E. Webster. 1986. Experimental acidification of Little Rock Lake, Wisconsin. *Water Air Soil Pollut.* 31:115-21 #313
- Brezonik, P. L., J. G. Eaton, T. M. Frost, P. J. Garrison, T. K. Kratz, C. E. Mach, J. H. McCormick, J. A. Perry, W. A. Rose, C. J. Sampson, B. C. L. Shelley, W. A. Swenson, and K. E. Webster. 1993. Experimental acidification of Little Rock Lake, Wisconsin: Chemical and biological changes over the pH range 6.1 to 4.7. *Can. J. Fish. Aquat. Sci.* 50:1101-21 #495
- Bridgham, S.D. 1988. Chronic effects of 2,2'-dichlorobiphenyl on reproduction, mortality, growth, and respiration of *Daphnia pulicaria*. *Arch. Environ. Contam. Toxicol.* 17:731-740. #1988-20
- Bridgham, S.D., D.C. McNaught, and C. Meadows. 1988. Effects of complex effluents on photosynthesis in Lake Erie and Lake Huron. In: *Functional testing of aquatic biota for estimating hazards of chemicals*. Cairns, J., Jr. and J.R. Pratt, eds. ASTM STP 988. American Society for Testing and Materials, Philadelphia, PA. Pp. 74-85. #1988-21
- Broderius, S. J. 1981. Determination of hydrocyanic acid and free cyanide in aqueous solution. *Anal. Chem.* 53:1472-77 #216
- Broderius, S. J., R. A. Drummond, J. T. Fiandt, and C. L. Russom. 1985. Toxicity of ammonia to early life stages of the smallmouth bass at four pH values. *Environ. Toxicol. Chem.* 4:87-96 #292
- Broderius, S. J. and M. D. Kahl. 1985. Acute toxicity of organic chemical mixtures to the fathead minnow. *Aquat. Toxicol.* 6:307-22 #293
- Broderius, S. J., M. D. Kahl, and M. D. Hoglund. 1995. Use of joint toxic response to define the primary mode of toxic action for diverse industrial organic chemicals. *Environ. Toxicol. Chem.* 14:1591-605 #559
- Broderius, S.J. 1979. Aqueous chemistry, analytical measurement, and toxicity of cyanide in aquatic ecosystems. Unpublished report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1979-4
- Broderius, S.J. 1992. Modeling the joint toxicity of xenobiotics to aquatic organisms: Basic concepts and approaches. In: *Aquatic toxicology and risk assessment*, 14th vol. M.A. Mayes and M.G. Barron, eds. Pp. 107-127. ASTM STP 1124. American Society for Testing and Materials, Philadelphia, PA. #1992-14
- Broderius, S.J., C.L. Russom, and M. Nendza. 1989. Mode of action-specific QSAR models for predicting acute and chronic toxicity of industrial organic chemicals to aquatic organisms. Unpublished report. Environmental Research Laboratory- Duluth, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1989-1
- Broderius, S.J. and L.L. Smith, Jr. 1977. Direct determination and calculation of aqueous hydrogen sulfide. *Analyt. Chem.*, 49:424-428. #1977-17
- Broderius, S.J. and L.L. Smith, Jr. 1977. Relationship between pH and acute toxicity of free cyanide and dissolved sulfide forms to the fathead minnow. In: *Recent Advances in Fish Toxicology--A Symposium*, Tubb. R.A., ed., pp. 88-117. #1977-16
- Broderius, S.J., L.L. Smith, Jr., and D.T. Lind. 1977. Relative toxicity of free cyanide and dissolved sulfide forms to the fathead minnow (*Pimephales promelas*). *J. Fish. Res. Board Can.* 34(12):2323-2332. #1977-3
- Broderius, S. J. and Smith, L. L., Jr. Direct photolysis of hexacyanoferrate complexes : proposed applications to the aquatic environment. EPA 600/3-80/003. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R805291. Project officer: J.E. Poldoski

- Broderius, S.J. Effect of hydrogen sulfide on fish and invertebrates. Part II - Hydrogen sulfide determination and relationship between pH and sulfide toxicity. EPA 600/3-76/062b. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800992. Project officer: K.E.F. Hokanson
- Brooke, L.T., G. T. Ankley, D. J. Call, and P. M. Cook. 1996. Gut content weight and clearance rate for three species of freshwater invertebrates. *Environ. Toxicol. Chem.* 15:223-28 #604
- Brooke, L.T. and D.J. Call. 1978. Bioconcentration, metabolism and elimination of eight aromatic compounds in the fathead minnow (*Pimephales promelas*). Unpublished report. Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1978-1
- Brooke, L.T., D.J. Call, S.L. Harting, C.A. Lindberg, T.P. Markee, D.J. McCauley, and S.H. Poirier. 1985. Acute toxicity of selenium (IV) and selenium (VI) to freshwater organisms. Unpublished report to: Battelle Memorial Research Institute, Columbus, OH . #1985-29
- Brooke, L.T., D.J. Call, C.A. Lindberg, T.P. Markee, S.H. Poirier, and D.J. McCauley. 1986. Acute toxicity of silver to selected freshwater invertebrates. Report to Battelle Memorial Research Institute, Columbus, Ohio. Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1986-1
- Brooke, L.T., D.J. Call, S.H. Poirier, and S.L. Harting. 1986. Toxicity of toluene to several freshwater species. Unpublished report. Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1986-36
- Brooke, L.T., D.J. Call, S.H. Poirier, T.P. Markee, C.A. Lindberg, D.J. McCauley, and P.G. Simonson. 1986. Acute toxicity and chronic effects of bis(tri-N-butyltin) oxide to several species of freshwater organisms. Unpublished report to Battelle Memorial Research Institute. #1986-39
- Brooke, L.T. and R.L. Spehar. 1993. Acute and chronic toxicity of nonylphenol to ten species of aquatic organisms. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN . #1993-23
- Brooke, L.T. and R.L. Spehar. 1994. Nonylphenol analysis. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN 55804. #1994-19
- Brooke, L.T. and R.L. Spehar. 1993. Nonylphenol toxicity. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1993-24
- Brown, E.J., J.J. Pignatello, M.M. Martinson, and R.L. Crawford. 1986. Pentachlorophenol degradation: A pure bacterial culture and an epilithic microbial consortium. *Applied and Environmental Microbiology* 52(1):92-97. #1986-27
- Bruner, K.A., S.W. Fisher, and P.F. Landrum. 1994. The role of the zebra mussel, *Dreissena polymorpha*, in contaminant cycling: I. The effect of body size and lipid content on the bioconcentration of PCBs and PAHs. *J. Great Lakes Res.*, 20(4):725-734. #1994-27
- Bruner, K.A., S.W. Fisher, and P.F. Landrum. 1994. The role of the zebra mussel, *Dreissena polymorpha*, in contaminant cycling: II. Zebra mussel contaminant accumulation from algae and suspended particles, and transfer to the benthic invertebrate, *Gammarus fasciatus*. *J Great Lakes Res.*, 20(4):735-750. #1994-26
- Brungs, W. A. 1971. Chronic effects of constant elevated temperature on the fathead minnow (*Pimephales promelas* Rafinesque). *Trans. Am. Fish. Soc.* 100:659-64 #51
- Brungs, W. A. 1971. Chronic effects of low dissolved oxygen concentrations on the fathead minnow (*Pimephales promelas*). *J. Fish. Res. Board Can.* 28:1119-23 #52
- Brungs, W. A. 1969. Chronic toxicity of zinc to the fathead minnow, *Pimephales promelas* Rafinesque. *Trans. Am. Fish. Soc.* 98:272-79 #26
- Brungs, W. A. 1973. Effects of residual chlorine on aquatic life. *J. Water Pollut. Control Fed.* 45:2180-2193 #80
- Brungs, W. A. and G. W. Bailey. 1967. Influence of suspended solids on the acute toxicity of endrin to fathead minnows. *Proc. 21st Ind. Waste Conf. Purdue Univ.* 50(2):4-12 #8
- Brungs, W. A., R. W. Carlson, W. B. Horning II, J. H. McCormick, R. L. Spehar, and J. D. Yount. 1978. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 50:1582-637 #166
- Brungs, W. A., J. R. Geckler, and M. H. Gast. 1976. Acute and chronic toxicity of copper to the fathead minnow in a surface water of variable quality. *Water Res.* 10:37-43 #130
- Brungs, W. A., E. N. Leonard, and J. M. McKim. 1973. Acute and long-term accumulation of copper by the brown bullhead, *Ictalurus nebulosus*. *J. Fish. Res. Board Can.* 30:583-86 #81
- Brungs, W. A., J. H. McCormick, T. W. Neiheisel, R. L. Spehar, C. E. Stephan, and G. N. Stokes. 1977.

- Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 49:1425-93 #142
- Brungs, W. A. and D. I. Mount. 1967. A device for continuous treatment of fish in holding chambers. *Trans. Am. Fish. Soc.* 96:55-57 #9
- Brungs, W. A. and D. I. Mount. 1967. Lethal endrin concentration in the blood of gizzard shad. *J. Fish. Res. Board Can.* 24:429-32 #10
- Brungs, W. A. and D. I. Mount. 1970. A water delivery system for small fish-holding tanks. *Trans. Am. Fish. Soc.* 99:799-802 #39
- Brungs, W.A. 1972. Applications and procedures for continuous-flow bioassays with aquatic organisms. Presented at the 1972 Annual Meeting of the American Society for Testing and Materials, June 25-29, 1972, Los Angeles, California. #1972-1
- Brungs, W.A. 1977. Comments on the criteria for free cyanide, phenols, and mixing zones proposed by the Pennsylvania Department of Environmental Resources for the Monongahela River. Unpublished report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1977-18
- Brungs, W.A. 1973. Comments on the proposed dissolved oxygen standards for the State of New York. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-1
- Brungs, W.A. 1973. Continuous-flow bioassays with aquatic organisms: Procedures and applications. In: *Biological methods for the assessment of water quality*. J. Cairns, Jr. and K.L. Dickson, eds. Pp. 117-126. ASTM STP 528. American Society for Testing and Materials, Philadelphia, PA. #1973-19
- Brungs, W.A. 1967. Distribution of cobalt 60, zinc 65, strontium 85, and cesium 137 in a freshwater pond. Public Health Service Publication No. 999-RH-24. 52 pp. U.S. Department of Health, Education, and Welfare, Rockville, MD. #1967-4
- Brungs, W.A. 1979. Effects of cyanide and reduced dissolved oxygen concentrations on warmwater fish. Unpublished report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1979-5
- Brungs, W.A. 1975. Effects of disinfectants on aquatic life. In: Disinfection of wastewater. Pp. 13-20. Unpublished report. Office of Research and Development, U.S. Environmental Protection Agency. #1975-1
- Brungs, W.A. 1972. Effects of pesticides and industrial wastes on surface water use. In: *River ecology and man*. Pp. 353-365. Academic Press, Inc., New York, NY. #1972-7
- Brungs, W.A. 1977. Effects of reduced dissolved oxygen concentrations on warmwater fish. Unpublished report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1977-19
- Brungs, W.A. 1965. Experimental uptake of strontium-85 by freshwater organisms. *Health Physics*, 1:41-46. #1965-3
- Brungs, W.A. "Feb. 15, 1972". Literature review of the effects of residual chlorine on aquatic life. First draft. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. # "Feb. 15, 1972"-12
- Brungs, W.A. 1974. Recommended zinc and copper criteria for aquatic life in Ohio. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1974-11
- Brungs, W.A. 1968. Research plans for the natural stream study at the Newtown Field Laboratory. Unpublished paper. Cincinnati, OH. #1968-6
- Brungs, W.A. 1976. Short-cut or screening toxicity tests. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1976-1
- Brungs, W.A. 1973. Statement on Illinois water quality standards for the March 28, 1973 hearing at Chicago, Illinois by William A. Brungs. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-2
- Brungs, W.A. 1973. Statement on Ohio water quality standards for the March 27, 1973 hearing at Columbus, Ohio by William A. Brungs. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-3
- Brungs, W.A. 1973. Statement on proposed Wisconsin water quality standards for the April 30, 1973 hearing at Madison, Wisconsin by William A. Brungs. Unpublished report. National Water Quality

- Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-4
- Brungs, W.A. 1975. Testimony in the case of Commonwealth of Pennsylvania against West Penn Power Company for a heated waste discharge to Spring Creek. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1975-2
- Brungs, W.A. 197? Testimony regarding fish kill in Cordele, Georgia. Unpublished testimony. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-26
- Brungs, W.A. and G.W. Bailey. 196? The influence of suspended solids on the acute toxicity of endrin to fathead minnows. Presented at the Purdue Industrial Waste Conference, Lafayette, Indiana, May 1966. #196?-1
- Brungs, W.A. and D.I. Mount. 1978. Introduction to the discussion of the use of aquatic toxicity tests for evaluation of the effects of toxic substances. In: *Estimating the hazard of chemical substances to aquatic life*. J. Cairns, Jr., K.L. Dickson, and A.W. Maki, eds. Pp. 15-26. ASTM STP 657. American Society for Testing and Materials, Philadelphia, PA. #1978-9
- Brungs, W. A. Effects of wastewater and cooling water chlorination on aquatic life. EPA 600/3-76/098. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB 257700).
- Brungs, W. A. and Jones, B. R. Temperature criteria for freshwater fish: protocol and procedures. EPA 600/3-77-061. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Buikema, A. L., Jr.; Cairns, J., Jr.; Edmunds, P. C., and Krakauer, T. H. Culturing and ecology studies of the rotifer, *Polyarthra vulgaris*. EPA 600/3-77/051. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800815. Project officer: R. Anderson
- Burkhard, L. P. 1998. Comparison of two models for predicting bioaccumulation of hydrophobic organic chemicals in a Great Lakes food web. *Environ. Toxicol. Chem.* 17:383-93 #668
- Burkhard, L. P. 2000. Estimating dissolved organic carbon partition coefficients for nonionic organic chemicals. *Environ. Sci. Technol.* 34:4663-68 #747
- Burkhard, L. P. 2003. Factors influencing the design of bioaccumulation factor and biota-sediment accumulation factor field studies. *Environ. Toxicol. Chem.* 22:351-60 #781
- Burkhard, L. P. and G. T. Ankley. 1989. Identifying toxicants: NETAC's toxicity-based approach. *Environ. Sci. Technol.* 23:1438-43 #385
- Burkhard, L. P., P. M. Cook, and D. R. Mount. 2003. The relationship of bioaccumulative chemicals in water and sediment to residues in fish: a visualization approach. *Environ. Toxicol. Chem.* 22:2822-30 #803
- Burkhard, L. P., E. J. Durhan, and M. T. Lukasewycz. 1991. Identification of nonpolar toxicants in effluents using toxicity based fractionation with gas chromatography/mass spectrometry. *Anal. Chem.* 63:277-83 #446
- Burkhard, L. P., D. D. Endicott, P. M. Cook, K. G. Sappington, and E. L. Winchester. 2003. Evaluation of two methods for prediction of bioaccumulation factors. *Environ. Sci. Technol.* 37:4626-34 #806
- Burkhard, L. P. and J. J. Jenson. 1993. Identification of ammonia, chlorine, and diazinon as toxicants in a municipal effluent. *Arch. Environ. Contam. Toxicol.* 25:506-15 #496
- Burkhard, L. P. and D. W. Kuehl. 1986. N-octanol/water partition coefficients by reverse phase liquid chromatography/mass spectrometry for eight tetrachlorinated planar molecules. *Chemosphere.* 15:163-67 #314
- Burkhard, L. P., D. W. Kuehl, and G. D. Veith. 1985. Evaluation of reverse phase liquid chromatography/mass spectrometry for estimation of n-octanol/water partition coefficients for organic chemicals. *Chemosphere.* 14:1551-60 #294
- Burkhard, L. P. and M. T. Lukasewycz. 2000. Some bioaccumulation factors and biota-sediment accumulation factors for polycyclic aromatic hydrocarbons in lake trout. *Environ. Toxicol. Chem.* 19:1427-29 #734
- Burkhard, L. P. and D. R. Mount. 2002. Comments on Eaganhouse and Pontolillo: assessing the reliability of physico-chemical property data (K_{ow} , S_w) for hydrophobic organic compounds: DDT and DDE as a case study. *SETAC Globe.* 40-41 #779
- Burkhard, L. P., J. W. Nichols, and P. M. Cook. 2000. Comments on biota-sediment accumulation and trophic transfer factors for extremely hydrophobic polychlorinated biphenyls. *Environ. Toxicol. Chem.* 19:2164-67 #743

- Burkhard, L. P. and B. R. Sheedy. 1995. Evaluation of screening procedures for bioconcentratable organic chemicals in effluents and sediments. *Environ. Toxicol. Chem.* 14:697-711 #560
- Burkhard, L. P., B. R. Sheedy, and D. J. McCauley. 1994. Prediction of chemical residues in aquatic organisms for a field discharge situation. *Chemosphere*. 29:141-53 #530
- Burkhard, L. P., B. R. Sheedy, D. J. McCauley, and G. M. DeGraeve. 1997. Bioaccumulation factors for chlorinated benzenes, chlorinated butadienes and hexachloroethane. *Environ. Toxicol. Chem.* 16:1677-86 #654
- Burkhard, L.P. and J.J. Jenson. 1990. Toxicity identification evaluation for Pocatello, Idaho treatment facility. NETAC Technical Report 19-90. National Effluent Toxicity Assessment Center, Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1990-24
- Burkhard, L.P. and D. Weininger. 1987. Determination of polychlorinated biphenyls using multiple regression with outlier detection and elimination. *Anal. Chem.* 59:1187-1190. #1987-24
- Burkhard, L. P.; Sheedy, B. R., Thomas, N. A., et al. Guidance on assessment and control of bioconcentratable contaminants in surface waters. Draft document. 1991. National Effluent Toxicity Assessment Center, Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN and Office of Water Enforcement and Permits, Office of Water Regulations and Standards, Office of Health and Environmental Assessment, U.S. Environmental Protection Agency, Cincinnati, OH. #1991-33
- Burkhard, L. P.; Sheedy, B. R., and Thomas, N. A. Field evaluation of residue prediction procedures used in EPA's guidance: "assessment and control of bioconcentratable contaminants": the Louisiana study. EPA 833-R-93-002. Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN and Office of Water, U.S. Environmental Protection Agency, Washington, DC. 1993 draft for appendix I
- Burkhart, J.G., G. Ankley, H. Bell, H. Carpenter, D. Fort, D. Gardiner, H. Gardner, R. Hale, J.C. Helgen, P. Jepson, D. Johnson, M. Lannoo, D. Lee, J. Lary, R. Levey, J. Magner, C. Meteyer, M.D. Shelby, and G. Lucier. 2000. Strategies for assessing the implications of malformed frogs for environmental health. *Environmental Health Perspectives*, 108(1):83-90. #2000-3
- Burle, L. 1995. Time of exposure based toxicity of zinc to the freshwater crustaceans *Ceriodaphnia dubia* and *Hyalella azteca*. Vol. 1: Report and Vol. 2: Graphs and appendices. Final report. Ecole Nationale du Génie de l'Eau et de l'Environnement de Strasbourg, France. #1995-16
- Burton, G. A., Jr., T. J. Norberg-King, C. G. Ingersoll, D. A. Benoit, G. T. Ankley, P. V. Winger, J. Kubitz, J. M. Lazorchak, M. E. Smith, E. Greer, F. J. Dwyer, D. J. Call, K. E. Day, P. Kennedy, and M. Stinson. 1996. Interlaboratory study of precision: *Hyalella azteca* and *Chironomus tentans* freshwater sediment toxicity assays. *Environ. Toxicol. Chem.* 15:1335-43 #605
- Busse, S.C. and E.H. Abbott. 1989. Cobalt-59 nuclear magnetic resonance studies of chloro-, bromo-, and iodo-substituted tris(acetylacetonato) cobalt (III) complexes. *Inorganic Chemistry* 28:488-491. #1989-21
- C
- Cairns, J., Jr. and D. I. Mount. 1990. Aquatic toxicology: Part 2 of a four-part series. *Environ. Sci. Technol.* 24:154-61 #410
- Cairns, J., Jr.; Thompson, K. W., and Hendricks, A. C. Effects of fluctuating, sublethal applications of heavy metal solutions upon the gill ventilation response of bluegills (*Lepomis macrochirus*). EPA 600/3-81/003. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB81-150997): R805274. Project officer: W.B. Horning, Jr.
- Call, D. J., L. T. Brooke, R. J. Kent, M. L. Knuth, S. H. Poirier, J. M. Huot, and A. R. Lima. 1987. Bromacil and diuron herbicides: Toxicity, uptake, and elimination in freshwater fish. *Arch. Environ. Contam. Toxicol.* 16:607-13 #338
- Call, D. J., S. H. Poirier, M. L. Knuth, S. L. Harting, and C. A. Lindberg. 1987. Toxicity of 3,4-dichloroaniline to fathead minnows, *Pimephales promelas*, in acute and early life stage exposures. *Bull. Environ. Contam. Toxicol.* 38:352-58 #339
- Call, D.J. 1993. Validation study of a protocol for testing the acute toxicity of pesticides to invertebrates using the apple snail (*Pomacea paludosa*). Unpublished report to U.S. Environmental Protection Agency from Lake Superior Research Institute, University of Wisconsin-Superior, Superior, WI. #1993-29

- Call, D.J., M.D. Balcer, L.T. Brooke, S.J. Lozano, and D.D. Vaishnav. 1991. Sediment quality evaluation in the lower Fox River and southern Green Bay of Lake Michigan. Final report for U.S. EPA Cooperative Agreement CR-815232. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1991-26
- Call, D.J., L.T. Brooke, and N. Ahmad. 1980. Estimates of "no effect" concentrations of selected pesticides in freshwater organisms. Third Quarterly Progress Report to EPA submitted to U.S. Environmental Protection Agency Research Laboratory, Duluth, MN by University of Wisconsin-Superior, Superior, WI. #1980-2
- Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter. 1986. Toxicity and metabolism studies with EPA priority pollutants and related chemicals in freshwater organisms. Submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN, by Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1986-4
- Call, D.J., L.T. Brooke, N. Ahmad, and D.D. Vaishnav. 1981. Aquatic pollutant hazard assessments and development of a hazard prediction technology by quantitative structure-activity relationships. Unpublished report for the U.S. Environmental Protection Agency by the Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1981-22a
- Call, D.J., L.T. Brooke, N. Ahmad, and D.D. Vaishnav. 1981. Aquatic pollutant hazard assessments and development of a hazard prediction technology by quantitative structure-activity relationships. Unpublished report for the U.S. Environmental Protection Agency by the Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1981-22b
- Call, D.J., L.T. Brooke, G.T. Ankley, D.A. Benoit, and R.A. Hoke. 1994. Appendix G: Biological effects testing procedures. In: *Great Lakes dredged material testing and evaluation manual* (draft version October 28, 1994). Great Lakes National Program Office, U.S. Environmental Protection Agency; and North Central Division, U.S. Army Corps of Engineers. #1994-10
- Call, D.J., L.T. Brooke, and R.J. Kent. 1982. Toxicity, bioconcentration, and metabolism of five herbicides in freshwater fish. U.S. EPA Grant No. R-806196-01. Submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN, by Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1982-11
- Call, D.J., L.T. Brooke, R.J. Kent, N. Ahmad, and J.E. Richter. 1982. Toxicological studies with herbicides, selected EPA priority pollutants and related chemicals in aquatic organisms. Project summary. U.S. EPA Grants #R-806196-01 & #R-880020010 and Cooperative Agreements #CR-806864-02 & #CR-880020010. Submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN, by Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI. #1982-2
- Call, D.J., L.T. Brooke, R.J. Kent, S.H. Poirier, M.L. Knuth, P.J. Shubat, and E.J. Slick. 1984. Toxicity, uptake, and elimination of the herbicides alachlor and dinoseb in freshwater fish. *J. Environ. Qual.*, 13(3):493-498. #1984-19
- Call, D.J., L.T. Brooke, C.A. Lindberg, T.P. Markee, D.J. McCauley, and S.H. Poirier. 1984. Toxicity of aluminum to freshwater organisms in water of pH 6.5 - 8.5. Center for Lake Superior Environmental Studies, University of Wisconsin, Superior, WI. #1984-23
- Call, D.J., L.T. Brooke, C. Northcott, and D.E. Hammermeister. 1984. Site-specific acute and chronic aquatic toxicity testing -- Western Lake Superior Sanitary District treatment plant effluent studies. In: *Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior*. A.R. Carlson and N.A. Thomas, eds. Pp. 96-111. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1984-15
- Call, D.J., D.A. Cox, D.L. Geiger, K.I. Genisot, T.P. Markee, L.T. Brooke, C.N. Polkinghorne, F.A. VandeVenter, J.W. Gorsuch, K.A. Robillard, T.F. Parkerton, M.C. Reiley, G.T. Ankley, and D.R. Mount. 2001. An assessment of the toxicity of phthalate esters to freshwater benthos. 2. Sediment exposures. *Environ. Toxicol. Chem.*, 20(8):1805-1815. #2001-7
- Call, D.J., K. Liber, F.W. Whiteman, T.D. Dawson, and L.T. Brooke. 1999. Observations on the 10-day *Chironomus tentans* survival and growth bioassay in evaluating Great Lakes sediments. *J. Great Lakes Res.*, 25(1):171-178. #1999-6
- Call, D.J., T.P. Markee, D.L. Geiger, L.T. Brooke, F.A. VandeVenter, D.A. Cox, K.I. Genisot, K.A. Robillard, J.W. Gorsuch, T.F. Parkerton, M.C. Reiley, G.T. Ankley, and D.R. Mount. 2001. An assessment of the toxicity of phthalate esters to freshwater benthos. 1. Aqueous exposures.

Environ. Toxicol. Chem., 20(8):1798-1804. #2001-6

- Call, D. J.; Brooke, L. T.; Ahmad, N., and Richter, J. E. Toxicity and metabolism studies with EPA priority pollutants and related chemicals in freshwater organisms. EPA 600/3-83-095. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB83-263665): Grant # R880020 CR 806864. Project officer: J.I. Teasley
- Call, D. J.; Brooke, L. T., and Kent, R. J. Toxicity, bioconcentration, and metabolism of five herbicides in freshwater fish. EPA 600/3-83/096. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB83-263681): Grant # R806196. Project officer: J.I. Teasley
- Canale, R.P. and M.T. Auer. 1987. Personal computers and environmental engineering, Part II - Applications. *Environ. Sci. Technol.* 21(10):936-942. #1987-17
- Canale, R. P.; DePalma, L. M., and Powers, W. F. Sampling strategies for water quality in the Great Lakes. EPA 600/3-80/055. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803754-02-1. Project officer: D.M. Dolan
- Canton, S. P. and Ward, J.V. Environmental effects of western coal surface mining. Part I - Limnology and biota of mine spoils ponds in northwest Colorado. EPA 600/3-79/124. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Canton, S. P. and Ward, J.V. Environmental effects of western coal surface mining. Part II - The aquatic macroinvertebrates of Trout Creek, Colorado. EPA 600/3-78/095. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Caple, R. 1984. Characterization of the organic nature of the Western Lake Superior Sanitary District effluent -- summary. In: *Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior*. A.R. Carlson and N.A. Thomas, eds. Pp. 112-114. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1984-15
- Cardenas, M., J. Gailani, C.K. Ziegler, and W. Lick. 1995. Sediment transport in the lower Saginaw River. *Mar. Freshwater Res.*, 46:337-347. #1995-21
- Cardenas, M. and W. Lick. 1996. Modeling the transport of sediments and hydrophobic contaminants in the lower Saginaw River. *J. Great Lakes Res.*, 22(3):669-682. #1996-24
- Cardwell, R.D., D.G. Foreman, T.R. Payne, and D.J. Wilbur. 1978. Acute and chronic toxicity of four organic chemicals to fish. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1978-15
- Cardwell, R. D.; Foreman, D. G.; Payne, T. R., and Wilbur, D. J. Acute and chronic toxicity of chlordane to fish and invertebrates. EPA 600/3-77/019. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract No. 68-01-0187.
- Cardwell, R. D.; Foreman, D. G.; Payne, T. R., and Wilbur, D. J. Acute toxicity of selected toxicants to six species of fish. EPA 600/3-76/008. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 68-01-0748. Project officer: C.E. Stephan
- Carey, A.E., N.S. Shifrin, A.P. Briefe, and P.M. Cook. 1990. Derivation of a Lake Ontario bioaccumulation factor for 2,3,7,8-TCDD. In: Lake Ontario TCDD bioaccumulation study, final report. Chapter 9. Unpublished report. U.S. Environmental Protection Agency, New York State Department of Environmental Conservation, New York State Department of Health, and Occidental Chemical Corporation. #1990-18
- Carlson, A. R. 1972. Effects of long-term exposure to carbaryl (Sevin) on survival, growth, and reproduction of the fathead minnow (*Pimephales promelas*). *J. Fish. Res. Board Can.* 29:583-87 #64
- Carlson, A. R. 1987. Effects of lowered dissolved oxygen concentration on the toxicity of 1,2,4-trichlorobenzene to fathead minnows. *Bull. Environ. Contam. Toxicol.* 38:667-73 #340
- Carlson, A. R. 1973. Induced spawning of largemouth bass [*Micropterus salmoides* (Lacepede)]. *Trans. Am. Fish. Soc.* 102:442-44 #82
- Carlson, A. R., J. Blocher, and L. J. Herman. 1980. Growth and survival of channel catfish and yellow

- perch exposed to lowered constant and diurnally fluctuating dissolved oxygen concentrations. *Prog. Fish-Cult.* 42:73-78 #199
- Carlson, A. R. and J. G. Hale. 1973. Early maturation of brook trout in the laboratory. *Prog. Fish-Cult.* 35:150-153 #83
- Carlson, A. R. and J. G. Hale. 1972. Successful spawning of largemouth bass, *Micropterus salmoides* (Lacepede) under laboratory conditions. *Trans. Am. Fish. Soc.* 101:539-42 #65
- Carlson, A. R. and L. J. Herman. 1978. Effect of long-term reduction and diel fluctuation in dissolved oxygen on spawning of black crappie *Pomoxis nigromaculatus*. *Trans. Am. Fish. Soc.* 107:742-46 #167
- Carlson, A. R. and P. A. Kosian. 1987. Toxicity of chlorinated benzenes to fathead minnows (*Pimephales promelas*). *Arch. Environ. Contam. Toxicol.* 16:129-35 #341
- Carlson, A. R., H. Nelson, and D. E. Hammermeister. 1986. Development and validation of site-specific water quality criteria for copper. *Environ. Toxicol. Chem.* 5:997-1012 #315
- Carlson, A. R., G. L. Phipps, and V. R. Mattson. 1991. The role of acid-volatile sulfide in determining cadmium bioavailability and toxicity in freshwater sediments. *Environ. Toxicol. Chem.* 10:1309-19 #447
- Carlson, A. R. and R. E. Siefert. 1974. Effects of reduced oxygen on the embryos and larvae of lake trout (*Salvelinus namaycush*) and largemouth bass (*Micropterus salmoides*). *J. Fish. Res. Board Can.* 31:1393-96 #101
- Carlson, A. R., R. E. Siefert, and L. J. Herman. 1974. Effects of lowered dissolved oxygen concentrations on channel catfish (*Ictalurus punctatus*) embryos and larvae. *Trans. Am. Fish. Soc.* 103:623-26 #102
- Carlson, A.R., H. Nelson, and D.E. Hammermeister. 1986. Evaluation of site-specific criteria for copper and zinc: An integration of metal addition toxicity, effluent and receiving water toxicity, and ecological survey data. EPA Project Summary, EPA 600/S3-86/026. U.S. Environmental Protection Agency, Cincinnati, OH. #1986-32
- Carlson, A.R. and N.A. Thomas, eds. 1984. Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1984-15
- Carlson, A. R.; Brungs, W. A.; Chapman, G. A., and Hansen, D. J. Guidelines for deriving numerical aquatic site-specific water quality criteria by modifying national criteria. EPA 600/3-84/099. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB85-121101).
- Carlson, A. R.; Nelson, H., and Hammermeister, D. Evaluation of site-specific criteria for copper and zinc: An integration of metal addition toxicity, effluent and receiving water toxicity, and ecological survey data. EPA 600/3-86-026. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB86-183928).
- Carlson, A. R. and Thomas, N. A. Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB84-195379).
- Carlson, A. R.; Tucker, J. A.; Mattson, V. R.; Phipps, G. L.; Cook, P. M.; Olson, G. F., and Puglisi, F. A. Cadmium and endrin toxicity to fish in waters containing mineral fibers. EPA 600/3-82/053. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN , (PB82-225038).
- Carlson, R.M. 1990. Assessment of the propensity for covalent binding of electrophiles to biological substrates. *Environmental Health Perspectives* 87:227-232. #1990-17
- Carlson, R. M. and Caple, R. Chemical/biological implications of using chlorine and ozone for disinfection. EPA 600/3-77/066. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800675. Project officer: G.E. Glass
- Carlson, R. M.; Oyler, A. R.; Gerhart, E. H.; Caple, R.; Welch, K. J.; Koppperman, H. L.; Bodenner, D., and Swanson, D. Implications to the aquatic environment of polynuclear aromatic hydrocarbons liberated from northern Great Plains coal. EPA 600/3-79/093. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803952. Project officer: D.W. Kuehl
- Carlson, R. W. 1984. The influence of pH, dissolved oxygen, suspended solids or dissolved solids upon

- ventilatory and cough frequencies in the bluegill *Lepomis macrochirus* and brook trout *Salvelinus fontinalis*. *Environ. Pollut. Ser. A.* 34:149-69 #274
- Carlson, R. W. 1982. Some characteristics of ventilation and coughing in the bluegill *Lepomis macrochirus* Rafinesque. *Environ. Pollut. Ser. A.* 29:35-56 #237
- Carlson, R. W. 1990. Ventilatory patterns of bluegill (*Lepomis macrochirus*) exposed to organic chemicals with different mechanisms of toxic action. *Comp. Biochem. Physiol.* 89C:181-96 #411
- Carlson, R. W., S. P. Bradbury, R. A. Drummond, and D. E. Hammermeister. 1998. Neurological effects on startle response and escape from predation by medaka exposed to organic chemicals. *Aquat. Toxicol.* 43:51-68 #698
- Carlson, R. W. and R. A. Drummond. 1978. Fish cough response - a method for evaluating quality of treated complex effluents. *Water Res.* 12:1-6 #168
- Carlson, R.W., G.J. Lien, and B.A. Holmen. 1989. An automated monitoring system for fish physiology and toxicology. EPA Project Summary, EPA 600/S3-89/011. U.S. Environmental Protection Agency, Cincinnati, OH. #1989-37
- Carlson, R. W. Aquatic animal respiration and cough response applied to innovative environmental biomonitoring: a bibliography. EPA 600/R-00/080. National Health and Environmental Effects Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Carpenter, S.R., T.M. Frost, D. Heisey, and T.K. Kratz. 1989. Randomized intervention analysis and the interpretation of whole-ecosystem experiments. *Ecology* 70(4):1142-1152. #1989-14
- Cary, G.A., G.F. Doeblner, A. Spacie, and A.G. Vilkas. 1976. Acute and chronic toxicity of di-2-ethylhexyl phthalate and di-n-butyl phthalate to fish and invertebrates. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C. #1976-19
- Caulfield, D.D., J. Filkins, and R. McGee. 1996. Calibration and multiple sound sources in marine geotechnical pollution surveys in rivers. In: Oceans 96 MTS/IEEE Conference Proceedings: The Coastal Ocean - Prospects for the 21st Century, September 23-26, 1996, Fort Lauderdale FL. Institute of Electrical and Electronics Engineers, Inc., Piscataway, NJ. Pp. 176-187. #1996-12
- Caulfield, D.D. and J.C. Filkins. 1999. Acoustic techniques for the mapping of the distribution of contaminated sediments. *Northeastern Geol. Environ. Sci.*, 21(1/2):130-135. #1999-13
- Champlin, J.G. and H.G. Stefan. 1996. Field study of the ice cover of a lake: implications for winter water quality modeling. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-31
- Chapman, G.A. (chair), B.S. Anderson, A.J. Bailer, R.B. Baird, R. Berger, D.T. Burton, D.L. Denton, W.L. Goodfellow, Jr., M.A. Heber, L.L. McDonald, T.J. Norberg-King, and P.J. Ruffier. 1996. Methods and appropriate endpoints: Discussion synopsis. In: *Whole effluent toxicity testing: An evaluation of methods and prediction of receiving system impacts*. D.R. Grothe, K.L. Dickson, and D.K. Reed-Judkins, eds. Pp. 51-78. SETAC Press, Pensacola, FL. #1996-5
- Chapra, S.C. and R.P. Canale. 1987. Personal computers and environmental engineering, Part I - Trends and perspectives. *Environ. Sci. Technol.* 21(9):832-837. #1987-16
- Chin, Y.-P., G. Aiken, and E. O'Loughlin. 1994. Molecular weight, polydispersity, and spectroscopic properties of aquatic humic substances. *Environ. Sci. Technol.* 28(10):1853-1858. #1994-25
- Chittim, B.G., J.A. Madge, and S.H. Safe. 1986. Pentachlorodibenzofurans: Synthesis, capillary gas chromatography and gas chromatographic/mass spectrometric characteristics. *Chemosphere* 15(9-12):1931-1934. #1986-18
- Chopra, K.S., D. Beaman, and P.M. Cook. 1982. Interlaboratory measurements of the chrysotile asbestos fiber and mass concentrations in water samples. In: *Asbestos standards: Materials and analytical methods*. NBS Special Publication No. 619. Pp. 121-131. National Bureau of Standards, Gaithersburg, MD. #1982-20
- Christensen, G. M. 1975. Biochemical effects of methylmercuric chloride, cadmium chloride, and lead nitrate on embryos and alevis of the brook trout, *Salvelinus fontinalis*. *Toxicol. Appl. Pharmacol.* 32:191-97 #116
- Christensen, G. M. 1971. Effects of metal cations and other chemicals upon the *in vitro* activity of two enzymes in the blood plasma of the white sucker, *Catostomus commersoni* (Lacepede). *Chem.-Biol. Interact.* 4:351-61 #53
- Christensen, G. M., J. T. Fiandt, and D. A. Benoit. 1977. Estimation of live fish weight by photography. *Prog. Fish-Cult.* 39:41-42 #143

- Christensen, G. M., J. T. Fiandt, and B. A. Poeschl. 1978. Cells, proteins, and certain physical-chemical properties in brook trout (*Salvelinus fontinalis*) blood. *J. Fish Biol.* 12:51-60 #169
- Christensen, G. M., E. P. Hunt, and J. T. Fiandt. 1977. The effect of methylmercuric chloride, cadmium chloride, and lead nitrate on six biochemical factors of the brook trout (*Salvelinus fontinalis*). *Toxicol. Appl. Pharmacol.* 42:523-30 #144
- Christensen, G. M., J. M. McKim, W. A. Brungs, and E. P. Hunt. 1972. Changes in the blood of the brown bullhead (*Ictalurus nebulosus* (Lesueur)) following short- and long-term exposure to copper(II). *Toxicol. Appl. Pharmacol.* 23:417-27 #66
- Christensen, G. M. and D. L. Olson. 1981. Effect of water pollutants and other chemicals upon ribonuclease activity *in vitro*. *Environ. Res.* 26:274-80 #217
- Christensen, G. M., D. L. Olson, and B. L. Riedel. 1982. Chemical effects on the activity of eight enzymes: A review and a discussion relevant to environmental monitoring. *Environ. Res.* 29:247-55 #238
- Christensen, G. M. and B. L. Riedel. 1981. Effect of water pollutants and other chemicals upon the activity of lipase *in vitro*. *Arch. Environ. Contam. Toxicol.* 10:357-63 #218
- Christensen, G. M. and B. L. Riedel. 1980. An enzyme-immobilization procedure for the analysis of enzyme-inhibiting chemicals in water. *Int. J. Environ. Anal. Chem.* 8:277-82 #200
- Christensen, G. M. and J. H. Tucker. 1976. Effects of selected water toxicants on the *in vitro* activity of fish carbonic anhydrase. *Chem.-Biol. Interact.* 13:181-92 #131
- Clement, J.; Sigford, A.; Drummond, R., and Novy, N. World of fresh water: A resource for studying issues of freshwater research. EPA 600/K-96-001. Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Coffin, D. L., P. M. Cook, and J. P. Creason. 1992. Relative mesothelioma induction in rats by mineral fibers: Comparison with residual pulmonary mineral fiber number and epidemiology. *Inhal. Toxicol.* 4:273-300 #469
- Coffin, D. L., L. D. Palekar, and P. M. Cook. 1982. Tumorigenesis by a ferroactinolite mineral. *Toxicol. Lett.* 13:143-50 #239
- Coffin, D.L., L.D. Palekar, P.M. Cook, and J.P. Creason. 1989. Comparison of mesothelioma induction in rats by asbestos and nonasbestos mineral fibers: possible correlation with human exposure data. In: *Biological Interaction of Inhaled Mineral Fibers and Cigarette Smoke*, Battelle Press, Columbus, OH, 1989, pp. 347-354. #1989-58
- Cole, R. A. Entrainment at a once-through cooling system on western Lake Erie. Volume I. EPA 600/3-78/070. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, R801188. Project officer: N. Thomas
- Cole, R. A. Larval fish distributions in southwestern Lake Erie near the Monroe Power Plant. EPA 600/3-78/069. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, R804517010. Project officer: N. Thomas
- Collette, B. B., M. A. Ali, K. E. F. Hokanson, M. Nagiec, S. A. Smirnov, J. E. Thorpe, A. H. Weatherley, and J. Willemse. 1977. Biology of percids. *J. Fish. Res. Board Can.* 34:1890-1899 #145
- Collins, H.L., W. Brown, and A. Edwards. 1996. The early life history of ruffe (*Gymnocephalus cernuus*) in the St. Louis River estuary, 1992-1994. Final report to the Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-9
- Collins, H.L., W. Brown, and A. Edwards. 1996. Spatial changes in the distribution and abundance of ruffe (*Gymnocephalus cernuus*) and native fishes in the St. Louis River estuary, 1989-1994. Final report to the Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-10
- Collyard, S. A., G. T. Ankley, R. A. Hoke, and T. A. Goldenstein. 1994. Influence of age on the relative sensitivity of *Hyalella azteca* to diazinon, alkylphenol ethoxylates, copper, cadmium, and zinc. *Arch. Environ. Contam. Toxicol.* 26:110-113 #531
- Connolly, J.P. and R.V. Thomann. 1982. Calculated contribution of surface microlayer PCB to contamination of Lake Michigan lake trout. *J. Great Lakes Res.* 8(2):367-375. #1982-15
- Cook, P. M. 1979. Preparation of extrapulmonary tissues and body fluids for quantitative transmission electron microscope analysis of asbestos and other mineral particle concentrations. *Ann. N.Y. Acad. Sci.* 330:717-24 #185
- Cook, P. M. 1983. Review of published studies on gut penetration by ingested asbestos fibers. *Environ. Health Perspect.* 53:121-30 #257

- Cook, P. M., G. E. Glass, D. R. Marklund, and J. H. Tucker. 1978. Evaluation of cartridge filters for removal of small fibers from drinking water. *Am. Water Works Assoc. J.* 70:459-64 #170
- Cook, P. M., G. E. Glass, and J. H. Tucker. 1974. Asbestiform amphibole minerals: Detection and measurement of high concentrations in municipal water supplies. *Science.* 185:853-55 #103
- Cook, P. M. and T. R. Henry. 2003. A conceptual model for evaluating relative potency data for use in ecological risk assessments. *Organohalogen Compounds.* 65:304-7 #801
- Cook, P. M. and G. F. Olson. 1979. Ingested mineral fibers: Elimination in human urine. *Science.* 204:195-98 #186
- Cook, P. M., L. D. Palekar, and D. L. Coffin. 1982. Interpretation of the carcinogenicity of amosite asbestos and ferroactinolite on the basis of retained fiber dose and characteristics in vivo. *Toxicol. Lett.* 13:151-58 #240
- Cook, P. M. and R. E. Peterson. 2003. Use of the TEQ model for assessing AHR mediated toxicity risks to populations of lake trout and other species in Lake Ontario. *Organohalogen Compounds.* 65:308-11 #802
- Cook, P. M., J. A. Robbins, D. D. Endicott, K. B. Lodge, P. D. Guiney, M. K. Walker, E. W. Zabel, and R. E. Peterson. 2003. Effects of aryl hydrocarbon receptor-mediated early life stage toxicity on lake trout populations in Lake Ontario during the 20th century. *Environ. Sci. Technol.* 37:3864-77 #799
- Cook, P.M. 1990. Alternatives for predicting TCDD bioaccumulation: the Lake Ontario experience. Unpublished paper. Presented at: Dioxin and PCBs: National Conference on Approaches to Address Human Health Risks and Aquatic Life Impacts. #1990-31
- Cook, P.M. 1990. Bioaccumulation of PCBs, PCDDs, and PCDFs. In: *Making a Great Lake Superior.* J. Vander Wal and P.D. Watts, eds. Pp. 244-248. Occasional Paper #9. Lakehead University Centre for Northern Studies, Thunder Bay, Ontario. #1990-13
- Cook, P.M. 1975. Semi-quantitative determination of asbestiform amphibole mineral concentrations in western Lake Superior water samples. In: *Advances in x-ray analysis.* Vol. 18. W.L. Pickles, C.S. Barrett, J.B. Newkirk, and C.O. Ruud, eds. Pp. 557-567. Plenum Publishing, New York, NY. #1975-8
- Cook, P.M., A.R. Batterman, and B.C. Butterworth. 1990. Laboratory study of TCDD bioaccumulation by lake trout from Lake Ontario sediments, food chain and water. In: Lake Ontario TCDD bioaccumulation study, final report. Chapter 6. Unpublished report. U.S. Environmental Protection Agency, New York State Department of Environmental Conservation, New York State Department of Health, and Occidental Chemical Corporation. #1990-18
- Cook, P.M. and L.P. Burkhard. 1998. Development of bioaccumulation factors for protection of fish and wildlife in the Great Lakes. In: EPA 823/R-98/002. Office of Water, U.S. Environmental Protection Agency, Washington, D.C. #1998-3
- Cook, P.M., A.R. Carlson, and H. Lee II. 1992. Tissue residue approach. In: *Sediment classification methods compendium.* Pp. 7.1-7.10. EPA 823-R-92-006. U.S. Environmental Protection Agency, Washington, D.C. #1992-18
- Cook, P.M., R.D. Johnson, G.T. Ankley, S.P. Bradbury, R.J. Erickson, and R.L. Spehar. 1992. Research to characterize risks associated with 2,3,7,8-tetrachlorodibenzo-p-dioxin and related chemicals in aquatic ecosystems. In: *Proceedings of the 12th International Symposium on Dioxins and Related Compounds,* University of Tampere, Finland. Pp. 305-310. Finnish Institute of Occupational Health, Helsinki, Finland. #1992-19
- Cook, P.M., D.W. Kuehl, M.K. Walker, and R.E. Peterson. 1991. Bioaccumulation and toxicity of TCDD and related compounds in aquatic ecosystems. In: *Biological basis for risk assessment of dioxins and related compounds.* M.A. Gallo et al., eds. Pp. 143-167. Banbury Report 35. Cold Spring Harbor Laboratory Press, Plainview, NY. #1991-20
- Cook, P.M. and D.L. Longrie. 1980. Determination of asbestos and other inorganic particle concentrations in urine. In: *Electron microscopy and x-ray applications to environmental and occupational health analysis, vol. 2.* P.A. Russell, ed. Pp. 219-231. Ann Arbor Science, Ann Arbor, MI. #1980-17
- Cook, P.M. and D.R. Marklund. 1982. Sample preparation for quantitative electron microscope analysis of asbestos fiber concentrations in air. In: *Asbestos standards: Materials and analytical methods.* Pp. 53-67. NBS Special Publication No. 619, National Bureau of Standards, Gaithersburg, MD. #1982-17

- Cook, P.M., I.B. Rubin, C.J. Maggiore, and W.J. Nicholson. 1976. X-ray diffraction and electron beam analysis of asbestosiform minerals in Lake Superior waters. Annals of the Institute of Electrical and Electronics Engineers No. 75CH1004-I 34-1, 9 pp. #1976-4
- Cook, P.M., P.L. Smith, and D.G. Wilson. 1978. Amphibole fiber concentration determination for a series of community air samples: Use of x-ray diffraction to supplement electron microscope analysis. In: *Electron microscopy and x-ray applications to environmental and occupational health analysis*. P.A. Russell and A.E. Hutchings, eds. Pp. 107-119. Ann Arbor Science, Ann Arbor, MI. #1978-10
- Cook, P.M., E.W. Zabel, and R.E. Peterson. 1997. The TCDD toxicity equivalence approach for characterizing risks for early life-stage mortality in trout. In: *Chemically induced alterations in functional development and reproduction of fishes*. R.M. Rolland, M. Gilbertson, and R.E. Peterson, eds. Pp. 9-27. SETAC Press, Pensacola, FL. #1997-8
- Cook, P.M., et al. Interim report on data and methods for assessment of 2,3,7,8-tetrachlorodibenzo-p-dioxin risks to aquatic life and associated wildlife. EPA 600/R-93-055. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Cook, R.B. and J.J. Ameel. 1984. Water chemistry in St. Louis Bay. In: *Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior*. A.R. Carlson and N.A. Thomas, eds. Pp. 1-56. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1984-15
- Cook, R.B., C.A. Kelley, J.C. Kingston, and R.G. Kreis, Jr. 1987. Chemical limnology of soft water lakes in the Upper Midwest. Biogeochemistry 4:97-117. #1987-45
- Cook, W.M., R.M. Anderson, and E.W. Schweiger. 2004. Is the matrix really inhospitable? Vole runway distribution in an experimentally fragmented landscape. *Oikos*, 104:5-14. #2004-1
- Cooper, C.L., W.C. Bartholomew, C.E. Herdendorf, J.M. Reutter, and F.L. Snyder. 1981. Limnetic larval fish of the Maumee and Sandusky River estuaries. *J. Great Lakes Res.* 7(1):51-54. #1981-11
- Cotter, A. M., P. A. Kosian, R. A. Hoke, and G. T. Ankley. 1996. Extraction and analysis of low concentrations of DDT, DDE and DDD in small volumes of sediment pore water. *Chemosphere*. 33:1341-54 #606
- Coward, N. A.; Horton, J. W.; Koch, R. G., and Morden, R. D. Static coal storage -- biological and chemical effects on the aquatic environment. EPA 600/3-80/083a. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (EPA 600/3-80/083c): Grant no. NERC-R-803937-02-0. Project officer: F. Puglisi
- Cowen, W. F. and Lee, G. F. Algal nutrient availability and limitation in Lake Ontario during IFYGL. EPA 600/3-76/094a. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # R80053702. Project officer: N. Thomas
- Cowen, W. F. and Lee, G. F. Algal nutrient availability and limitation in Lake Ontario during IFYGL. Appendices to Part I: available phosphorus in urban runoff and Lake Ontario tributary waters. EPA 600/3-76/094b. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB 265040): Contract # R-800537-02. Project officer: N. Thomas
- Cowen, W. F.; Sirisinha, K., and Lee, G. F. Algal nutrient availability and limitation in Lake Ontario during IFYGL. Part II. Nitrogen available in Lake Ontario tributary water samples and urban runoff from Madison, Wisconsin. EPA 600/3-77/045. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # R-800537-02. Project officer: N. Thomas
- Cowles, E. J., G. M. Christensen, and A. C. Hilding. 1968. Detection of indoleamines and catecholamines on chromatograms by heating with paraformaldehyde. *J. Chromatogr.* 35:389-95 #16
- Crane, J. L. Assessment of contaminated sediments in slip C Duluth Harbor, Minnesota. EPA 905/R-99/007. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL.
- Crane, J. L.; Pilli, A., and Russo, R. C. CETIS: Complex Effluents Toxicity Information System: Data encoding guidelines and procedures. EPA 600/8-84-029. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, CR 807240. Contract no. 6639105

- Crane, J. L.; Schubauer-Berigan, M., and Schmude, K. Sediment assessment of hotspot areas in the Duluth/Superior harbor. EPA-905-R97-020. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL.
- Crane, J. L.; Smorong, D. E.; Pillard, D. A., and MacDonald, D. D. Sediment remediation scoping project in Minnesota Slip, Duluth Harbor. Final report. EPA 905/R-02/002. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL.
- D
- Dady, J. M., S. P. Bradbury, A. D. Hoffman, M. M. Voit, and D. L. Olson. 1991. Hepatic microsomal N-hydroxylation of aniline and 4-chloroaniline by rainbow trout (*Oncorhynchus mykiss*). *Xenobiotica*. 21:1605-20 #448
- Dady, J.M., M.M. Voit, and S.P. Bradbury. 1992. Formation of hydroquinone from the o-dealkylation of p-methoxyphenol by rainbow trout microsomes (abstract only). *The Toxicologist* 12(1):327. #1992-6
- Danielsen, K.M., Y.-P. Chin, J.S. Buterbaugh, T.L. Gustafson, and S.J. Traina. 1995. Solubility enhancement and fluorescence quenching of pyrene by humic substances: the effect of dissolved oxygen on quenching processes. *Environ. Sci. Technol.*, 29(8):2162-2165. #1995-20
- Dave, G. Influence of diet and starvation on toxicity of endrin to fathead minnows (*Pimephales promelas*). EPA 600/3-81/048. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB81-244436): Grant no. CR 806860. Project officer: J.M. McKim
- Davies, P. H. and Everhart, W. H. Effects of chemical variations in aquatic environments. Volume III: Lead toxicity to rainbow trout and testing application factor concept. EPA R3-73/011c. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Grant # WP-01398-01. Project officer: J.H. McCormick
- Davis, W.S., L.A. Fay, and C.E. Herdendorf. 1987. Overview of USEPA/CLEAR Lake Erie sediment oxygen demand investigations during 1979. *J. Great Lakes Res.* 13(4):731-737. #1987-14
- Dawley, E.; Monk, B.; Schiewe, M.; Ossiander, F., and Ebel, W. Salmonid bioassay of supersaturated dissolved air in water. EPA 600/3-76/056. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, EPA-IAG-0155(D). Project officer: G.R. Bouck
- Dawson, D.A., T.W. Schultz, L.L. Baker, and T.S. Wilke. 1990. Comparative developmental toxicity of acetylenic alcohols on embryos and larvae of *Xenopus laevis*. In: *Aquatic toxicology and risk assessment*, 13th vol. W.G. Landis and W.H. van der Schalie, eds. ASTM STP 1096. American Society for Testing and Materials, Philadelphia, PA. #1990-2
- Dawson, T. D., J. J. Jenson, and T. J. Norberg-King. 2000. Laboratory culture of *Chironomus tentans* for use in toxicity testing: optimum initial egg-stocking densities. *Hydrobiologia*. 438:251-56 #754
- Dawson, T. D., K. G. Lott, E. N. Leonard, and D. R. Mount. 2003. Time course of metal loss in *Lumbriculus variegatus* following sediment exposure. *Environ. Toxicol. Chem.* 22:886-89 #787
- Dawson, T.D., J.J. Jenson, and T.J. Norberg-King. 1998. Laboratory culture of *Chironomus tentans* for use in toxicity testing: optimum initial egg stocking densities. Unpublished paper. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1998-6
- de Vlaming, V. and Norberg-King, T. J. A review of single species toxicity tests : are the tests reliable predictors of aquatic ecosystem community reponses? EPA 600/R-97/114. Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- DeFoe, D. L. 1975. Multichannel toxicant injection system for flow-through bioassays. *J. Fish. Res. Board Can.* 32:544-46 #117
- DeFoe, D. L. 1977. Temperature safety device for aquatic laboratory systems. *Prog. Fish-Cult.* 39:131 #146
- DeFoe, D. L. and G. T. Ankley. 2003. Evaluation of time-to-effects as a basis for quantifying the toxicity of contaminated sediments. *Chemosphere*. 51:1-5 #782
- DeFoe, D. L. and G. T. Ankley. 1998. Influence of storage time on toxicity of freshwater sediments to benthic macroinvertebrates. *Environ. Pollut.* 99:123-31 #683
- DeFoe, D. L., G. W. Holcombe, D. E. Hammermeister, and K. E. Biesinger. 1990. Solubility and toxicity of eight phthalate esters to four aquatic organisms. *Environ. Toxicol. Chem.* 9:623-36 #412
- DeFoe, D. L., G. D. Veith, and R. W. Carlson. 1978. Effects of Aroclor 1248 and 1260 on the fathead minnow (*Pimephales promelas*). *J. Fish. Res. Board Can.* 35:997-1002 #171

- Degitz, S. J., E. J. Durhan, J. E. Tietge, P. A. Kosian, G. W. Holcombe, and G. T. Ankley. 2003. Developmental toxicity of methoprene and several degradation products in *Xenopus laevis*. *Aquat. Toxicol.* 64:97-105 #795
- Degitz, S. J., G. W. Holcombe, P. A. Kosian, J. E. Tietge, E. J. Durhan, and G. T. Ankley. 2003. Comparing the effects of stage and duration of retinoic acid exposure on amphibian limb development: chronic exposure results in mortality, not limb malformations. *Toxicological Sciences*. 74:139-46 #793
- Degitz, S. J., P. A. Kosian, E. A. Makynen, K. M. Jensen, and G. T. Ankley. 2000. Stage- and species-specific development toxicity of all-trans retinoic acid in four native North American ranids and *Xenopus laevis*. *Toxicological Sciences*. 57:264-74 #746
- DeGraeve, G.M., W.H. Clement, and M.F. Arthur. 1989. A method for conducting laboratory toxicity degradation evaluations of complex effluents. Report to U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN by Battelle, Columbus Division, Columbus, OH. #1989-20
- Degraeve, G.M., W.H. Clement, M.F. Arthur, R.B. Gillespie, and G.K. O'Brien. 1988. Environmental persistence/degradation of toxicity in complex effluents: Laboratory simulations of field conditions. In: *Aquatic toxicology and hazard assessment, 10th vol.* W.J. Adams, G.A. Chapman, and W.G. Landis, eds. ASTM STP 971. American Society for Testing and Materials, Philadelphia, PA. Pp. 177-189. #1988-13
- DeLaune, R.D., W.H. Patrick, Jr., C.W. Lindau, J.H. Pardue, and P.H. Masscheleyn. 1993. Capacity of lower Mississippi valley wetlands to transform and assimilate anthropogenic substances. Final report for Cooperative Agreement CR816805-1, to U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1993-18
- Delumyea, R. G. and Petel, R. L. Atmospheric inputs of phosphorus to southern Lake Huron, April-October 1975. EPA 600/3-77/038. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803086. Project officer: M.D. Mullin
- Denny, J.S. 1988. Guidelines for the culture of fathead minnows, *Pimephales promelas* for use in toxicity tests. EPA 600/3-87/001. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-38
- Denny, J. S. Guidelines for the culture of fathead minnows *Pimephales promelas* for use in toxicity tests. EPA 600/3-87/001. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Denny, J. S.; Spehar, R. L.; Mead, K. E., and Yousuff, S. C. Guidelines for culturing the Japanese medaka (*Oryzias latipes*). EPA 600/3-91-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Denton, D.L. and T.J. Norberg-King. 1996. Whole effluent toxicity statistics: A regulatory perspective. In: *Whole effluent toxicity testing: An evaluation of methods and prediction of receiving system impacts*. D.R. Grothe, K.L. Dickson, and D.K. Reed-Judkins, eds. Pp. 83-102. SETAC Press, Pensacola, FL. #1996-4
- DePinto, J.V., V.J. Bierman, Jr., and F.H. Verhoff. 1976. Seasonal phytoplankton succession as a function of species competition for phosphorus and nitrogen. In: *Modeling biochemical processes in aquatic ecosystems*. R.P Canale, ed. Pp. 141-169. Ann Arbor Science, Ann Arbor, MI. #1976-8
- DePinto, J.V., T.L. Theis, T.C. Young, and S.T. Leach. 1994. Predicting metals partitioning during resuspension events. In: *Transport and transformation of contaminants near the sediment-water interface*. DePinto, Joseph V., Wilbert Lick, and John F. Paul, eds. Lewis Publishers, Boca Raton, FL. Pp. 177-203. #1994-4
- DePinto, J.V., T.L. Theis, T.C. Young, D. Vanetti, M. Waltman, and S. Leach. 1988. Exposure and biological effects of in-place pollutants: Sediment exposure potential and particle-contaminant interactions (Appendix A). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix A. #1988-4

- DePinto, J.V. and F.H. Verhoff. 1977. Nutrient regeneration from aerobic decomposition of green algae. *Environmental Science and Technology* 11(4):371-377. #1977-5
- DePinto, J.V., T.C. Young, J.S. Bonner, and P.W. Rodgers. 1986. Microbial recycling of phytoplankton phosphorus. *Can. J. Fish. Aquat. Sci.* 43:336-342. #1986-25
- DePinto, J.V., T.C. Young, and L.M. McIlroy. 1986. Great Lakes water quality improvement. *Environ. Sci. Technol.* 20(8):752-759. #1986-11
- Detenbeck, N. E., S. L. Batterman, V. J. Brady, J. C. Brazner, V. M. Snarski, D. K. Taylor, J. A. Thompson, and J. W. Arthur. 2000. A test of watershed classification systems for ecological risk assessment. *Environ. Toxicol. Chem.* 19:1174-81 #731
- Detenbeck, N. E., C. M. Elonen, D. L. Taylor, L. E. Anderson, T. M. Jicha, and S. L. Batterman. 2003. Effects of hydrogeomorphic region, catchment storage and mature forest on baseflow and snowmelt stream water quality in second-order Lake Superior Basin tributaries. *Freshwater Biol.* 48:912-27 #791
- Detenbeck, N. E., C. M. Elonen, D. L. Taylor, A. M. Cotter, F. A. Puglisi, and W. D. Sanville. 2002. Effects of agricultural activities and best management practices on water quality of seasonal prairie pothole wetlands. *Wetlands Ecology and Management*. 10:335-54 #778
- Detenbeck, N. E., S. M. Galatowitsch, J. Atkinson, and H. Ball. 1999. Evaluating perturbations and developing restoration strategies for inland wetlands in the Great Lakes Basin. *Wetlands*. 19:789-820 #725
- Detenbeck, N. E., R. Hermanutz, K. Allen, and M. C. Swift. 1996. Fate and effects of the herbicide atrazine in flow-through wetland mesocosms. *Environ. Toxicol. Chem.* 15:937-46 #607
- Detenbeck, N. E., C. A. Johnston, and G. J. Niemi. 1993. Wetland effects on lake water quality in the Minneapolis/St. Paul metropolitan area. *Landscape Ecol.* 8:39-61 #497
- Detenbeck, N. E., D. K. Taylor, A. R. Lima, and C. A. Hagley. 1996. Temporal and spatial variability in water quality of wetlands in the Minneapolis/St. Paul, MN metropolitan area: Implications for monitoring strategies and designs . *Environ. Monit. Assess.* 40:11-40 #608
- Detenbeck, N. 1994. Ecological risk assessment case study: Effects of physical disturbance on water quality status and water quality improvement function of urban wetlands. In: *A review of ecological assessment case studies for a risk assessment perspective, vol. II*. Pp. 4.1-4.58. EPA 630/R-94-003. Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C. #1994-17
- Detenbeck, N.E. and P.L. Brezonik. 1991. Phosphorus sorption by sediments from a soft-water seepage lake. 1. An evaluation of kinetic and equilibrium models. *Environ. Sci. Technol.* 25:395-403. #1991-31
- Detenbeck, N.E. and P.L. Brezonik. 1991. Phosphorus sorption by sediments from a soft-water seepage lake. 2. Effects of pH and sediment composition. *Environ. Sci. Technol.* 25:403-409. #1991-15
- Detenbeck, N.E., P.W. DeVore, and G.J. Niemi. 1992. Recovery of temperate-stream fish communities from disturbance: A review of case studies and synthesis of theory. *Environmental Management* 16(1):33-53. #1992-8
- Detenbeck, N.E., C.A. Johnston, and G.J. Niemi. 1990. Use of a geographic information system to assess the effect of wetlands on lake water quality in the Minneapolis/St. Paul metropolitan area. In: *Proceedings of the Minnesota Lake Management Conference*, October 7-9, 1990, Brainerd, MN. Pp. 81-85. #1990-5
- Detenbeck, N.E., G.J. Niemi, D.L. Taylor, and A. Lima. 1992. Assessing recovery of freshwater wetland water-quality from disturbance. Final report to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1992-2
- Detenbeck, N. E. Methods for evaluating wetland condition #7 : wetlands classification. EPA 822/R-02/017. Office of Water, U.S. Environmental Protection Agency, Washington, DC.
- Devlin, E.W., J.D. Brammer, R.L. Puyear, and J.M. McKim. 1996. Prehatching development of the fathead minnow *Pimephales promelas* Rafinesque. EPA 600/R-96-079. National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-7
- DeVore, P. W. and J. G. Eaton. 1983. An investigation of spinal deformity of trout (*Salmo* sp.) in the Brule River, Wisconsin. *J. Great Lakes Res.* 9:69-73 #258
- Di Toro, D.M., J.P. Connolly, R.P. Winfield, and J.R. Newton. 1988. Development, verification, and application of interconnecting channel models (Appendix U). In: Final report to the Upper Great

- Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix U. #1988-4
- Di Toro, D. M., J. D. Mahony, D. J. Hansen, K. J. Scott, A. R. Carlson, and G. T. Ankley. 1992. Acid volatile sulfide predicts the acute toxicity of cadmium and nickel in sediments. *Environ. Sci. Technol.* 26:96-101 #470
- Di Toro, D. M., N. A. Thomas, C. E. Herdendorf, R. P. Winfield, and J. P. Connolly. 1987. A post audit of a Lake Erie eutrophication model. *J. Great Lakes Res.* 13:801-25 #342
- Di Toro, D. M., C. S. Zarba, D. J. Hansen, W. J. Berry, R. C. Swartz, C. E. Cowan, S. P. Pavlou, H. E. Allen, and P. R. Paquin. 1991. Technical basis for establishing sediment quality criteria for nonionic organic chemicals using equilibrium partitioning. *Environ. Toxicol. Chem.* 10:1541-83 #449
- Di Toro, D. M. and Connolly, J. P. Mathematical models of water quality in large lakes. Part 2: Lake Erie. EPA 600/3-80-065. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803030.
- Di Toro, D. M. and Matystik, W. F., Jr. Mathematical models of water quality in large lakes. Part 1: Lake Huron and Saginaw Bay. EPA 600/3-80-056. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803030.
- Diamond, S. A., N. J. Milroy, V. R. Mattson, L. J. Heinis, and D. R. Mount. 2003. Photoactivated toxicity in amphipods collected from polycyclic aromatic hydrocarbon-contaminated sites. *Environ. Toxicol. Chem.* 22:2752-60 #804
- Diamond, S. A., D. R. Mount, L. P. Burkhard, G. T. Ankley, E. A. Makynen, and E. N. Leonard. 2000. Effect of irradiance spectra on the photoinduced toxicity of three polycyclic aromatic hydrocarbons. *Environ. Toxicol. Chem.* 19:1389-96 #733
- Diamond, S. A., G. S. Peterson, J. E. Tietge, and G. T. Ankley. 2002. Assessment of the risk of solar ultraviolet radiation to amphibians. III. Prediction of impacts in selected northern midwestern wetlands. *Environ. Sci. Technol.* 36:2866-74 #776
- Diamond, S.A. 2003. Photoactivated toxicity in aquatic environments. In: *UV Effects in Aquatic Organisms and Ecosystems*, Helbling, E.W. and Zagarese, H., eds. pp. 219-250. The Royal Society of Chemistry, Cambridge, UK. #2003-1
- Dickson, K.L., W.T. Waller, J.H. Kennedy, and L.P. Ammann. 1992. Assessing the relationship between ambient toxicity and instream biological response. *Environmental Toxicology and Chemistry* 11:1307-1322. #1992-11
- Dickson, K.L., W.T. Waller, J.H. Kennedy, L.P. Ammann, R. Guinn, and T.J. Norberg-King. 1996. Relationships between effluent toxicity, ambient toxicity, and receiving system impacts: Trinity River dechlorination case study. In: *Whole effluent toxicity testing: An evaluation of methods and prediction of receiving system impacts*. D.R. Grothe, K.L. Dickson, and D.K. Reed-Judkins, eds. Pp. 287-308. SETAC Press, Pensacola, FL. #1996-11
- Dierkes, J.R., G.T. Ankley, and M.K. Berigan. 1990. Results of pore water, sediment and elutriate toxicity assessment in Oswego Bay, Toronto Harbor. Unpublished report. U.S. Environmental Protection Agency, Duluth, MN. #1990-20
- Dilks, D. W., J. S. Helfand, V. J. Bierman, Jr., and L. P. Burkhard. 1993. Field application of a steady-state mass balance model for hydrophobic organic chemicals in an estuarine system. *Wat. Sci. Tech.* 28:263-71 #655
- Dill, D. C.; McCarty, W. M.; Alexander, H. C., and Bartlett, E. A. Toxicity of 1,1-dichloroethylene (vinylidene chloride) to aquatic organisms. EPA 600/3-80/057. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. Project officer: J.I. Teasley
- Doerger, J. U., J. R. Meier, R. A. Dobbs, R. D. Johnson, and G. T. Ankley. 1992. Toxicity reduction evaluation at a municipal wastewater treatment plant using mutagenicity as an endpoint. *Arch. Environ. Contam. Toxicol.* 22:384-88 #471
- Dolan, D.M. and V.J. Bierman, Jr. 1982. Mass balance modeling of heavy metals in Saginaw Bay, Lake Huron. *J. Great Lakes Res.* 8(4):676-694. #1982-7

- Dolan, D. M., A. K. Yui, and R. D. Geist. 1981. Evaluation of river load estimation methods for total phosphorus. *J. Great Lakes Res.* 7:207-14 #219
- Doudoroff, P. Toxicity to fish of cyanides and related compounds : a review. EPA 600/3-76/038. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R-802459. Project officer: D.I. Mount
- Dougherty, R.C., M.J. Whitaker, S.Y. Tang, R. Bottcher, M. Keller, and D.W. Kuehl. 1981. Sperm density and toxic substances: A potential key to environmental health hazards. In: *Environmental health chemistry - the chemistry of environmental agents as potential human hazards*. J.D. McKinney, ed. Pp. 263-278. Ann Arbor Science, Ann Arbor, MI. #1981-16
- Dougherty, R. C., M. J. Whitaker, L. M. Smith, D. L. Stalling, and D. W. Kuehl. 1980. Negative chemical ionization studies of human and food chain contamination with xenobiotic chemicals. *Environ. Health Perspect.* 36:103-18 #201
- Drummond, R. A. 1977. Disposable electrode chamber for measuring opercular movements of fathead minnows. *Prog. Fish-Cult.* 39:94 #147
- Drummond, R. A. and W. F. Dawson. 1970. An inexpensive method for simulating diel patterns of lighting in the laboratory. *Trans. Am. Fish. Soc.* 99:434-35 #40
- Drummond, R. A. and W. F. Dawson. 1974. An inexpensive solid-state amplifier for detecting movements and electrical potentials of fish. *Trans. Am. Fish. Soc.* 103:391-92 #104
- Drummond, R. A., G. F. Olson, and A. R. Batterman. 1974. Cough response and uptake of mercury by brook trout, *Salvelinus fontinalis*, exposed to mercuric compounds at different hydrogen-ion concentrations. *Trans. Am. Fish. Soc.* 103:244-49 #105
- Drummond, R. A. and C. L. Russom. 1990. Behavioral toxicity syndromes: A promising tool for assessing toxicity mechanisms in juvenile fathead minnows. *Environ. Toxicol. Chem.* 9:37-46 #413
- Drummond, R. A., W. A. Spoor, and G. F. Olson. 1973. Some short-term indicators of sublethal effects of copper on brook trout, *Salvelinus fontinalis*. *J. Fish. Res. Board Can.* 30:698-701 #84
- Drummond, R.A. 197? Fish coughs - a promising endpoint for evaluating the quality of treated effluents. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-10
- Drummond, R.A. 1980. Rapid assessment methods (fish cough response, etc.). In: *Proceedings of the Seminar on Biological Monitoring and its Use in the NPDES Permit Program*, October 2, 1979, Chicago, IL. EPA 600/9-80-026. Center for Environmental Research Information, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH. Pp. 95-96. #1980-7
- Drummond, R.A. 1984. Ventilatory response of bluegill sunfish exposed to final treated WLSSD effluent - - summary. In: *Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior*. A.R. Carlson and N.A. Thomas, eds. Pp. 93-95. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1984-15
- Drummond, R.A. and D.A. Benoit. 1976. Importance of test procedures on the toxicity of cadmium to brook trout (*Salvelinus fontinalis*). Unpublished paper. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1976-12
- Drummond, R.A. and R.W. Carlson. 1978. Fish cough response -- a method for evaluating quality of treated complex effluents. *Water Res.*, 12:1-6. #1978-13
- Drummond, R.A., C.L. Russom, D.L. Geiger, and D.L. DeFoe. 1986. Behavioral and morphological changes in fathead minnow (*Pimephales promelas*) as diagnostic endpoints for screening chemicals according to mode of action. In: *Aquatic toxicology and environmental fate, 9th vol.* T.M. Poston and R. Purdy, eds. Pp. 415-435. ASTM STP 921. American Society for Testing and Materials, Philadelphia, PA. #1986-29
- Drummond, R. A. and Carlson, R. W. Procedures for measuring cough (gill purge) rates of fish. EPA 600/3-77/133. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Dunn, B.P., J.J. Black, and A. MacCubbin. 1987. ³²P-postlabeling analysis of aromatic DNA adducts in fish from polluted areas. *Cancer Research* 47:6543-6548. #1987-15
- Durhan, E. J., C Lambright, V. Wilson, B. C. Butterworth, D. W. Kuehl, E. F. Orlando, L. J. Guillette, Jr., L. E. Gray, and G. T. Ankley. 2002. Evaluation of androstenedione as an endrogenic component of river water downstream of a pulp and paper mill effluent. *Environ. Toxicol. Chem.* 21:1973-76 #777

- Durhan, E. J., M. T. Lukasewycz, and J. R. Amato. 1990. Extraction and concentration of nonpolar organic toxicants from effluents using solid phase extraction. *Environ. Toxicol. Chem.* 9:463-66 #414
- Durhan, E. J., M. T. Lukasewycz, and S. E. Baker. 1993. Alternatives to methanol-water elution of solid-phase extraction columns for the fractionation of high log K_{ow} organic compounds in aqueous environmental samples. *J. Chromatogr.* 629:67-74 #498
- Durhan, E. J.; Norberg-King, T. J.; Burkhard, L. P.; Ankley, G. T.; Lukasewycz, M. T.; Schubauer-Berigan, M. K., and Thompson, J. A. Methods for aquatic toxicity identification evaluations: Phase II toxicity identification procedures for samples exhibiting acute and chronic toxicity. EPA 600/R-92-080. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Dwyer, F. J.; Hardesty, D. K.; Henke, C. E.; Ingersoll, C. G.; Whites, D. W.; Mount, D. R., and Bridges, C. M. Assessing containment sensitivity of endangered and threatened species: effluent toxicity tests. EPA 600/R-99/099. National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, U.S. Environmental Protection Agency, Gulf Breeze, FL. Project officer: F.L. Mayer, Jr.
- Dwyer, F. J.; Hardesty, D. K.; Henke, C. E.; Ingersoll, C. G.; Whites, D. W.; Mount, D. R., and Bridges, C. M. Assessing contaminant sensitivity of endangered and threatened species: toxicant classes. EPA 600/R-99/098. National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, U.S. Environmental Protection Agency, Gulf Breeze, FL. Project officer: F.L. Mayer, Jr.
- Dyer, S.D., J.R. Coats, S.P. Bradbury, G.J. Atchison, and J.M. Clark. 1989. Effects of water hardness and salinity on the acute toxicity and uptake of fenvalerate by bluegill (*Lepomis macrochirus*). *Bull. Environ. Contam. Toxicol.* 42:359-366. #1989-40
- E
- Eadie, B.J. and S. Lozano. 1999. Grain size distribution of the surface sediments collected during the Lake Michigan mass balance and environmental mapping and assessment programs. NOAA Technical Memorandum ERL GLERL-111. Environmental Research Laboratories, National Oceanic and Atmospheric Administration, U.S. Dept. of Commerce, Ann Arbor, MI. #1999-4
- Eaton, J. G. 1974. Chronic cadmium toxicity to the bluegill (*Lepomis macrochirus* Rafinesque). *Trans. Am. Fish. Soc.* 103:729-35 #106
- Eaton, J. G. 1970. Chronic malathion toxicity to the bluegill (*Lepomis macrochirus* Rafinesque). *Water Res.* 4:673-84 #41
- Eaton, J. G. 1973. Chronic toxicity of a copper, cadmium, and zinc mixture to the fathead minnow (*Pimephales promelas* Rafinesque). *Water Res.* 7:1723-36 #85
- Eaton, J. G., V. R. Mattson, L. H. Mueller, and D. K. Tanner. 1983. Effects of suspended clay on bioconcentration of Kelthane® in fathead minnows. *Arch. Environ. Contam. Toxicol.* 12:439-45 #259
- Eaton, J. G., J. H. McCormick, B. E. Goodno, D. G. O'Brien, H. G. Stefan, M. Hondzo, and R. M. Scheller. 1995. A field information-based system for estimating fish temperature tolerances. *Fisheries.* 20:10-18 #561
- Eaton, J. G., J. H. McCormick, H. G. Stefan, and M. Hondzo. 1995. Extreme value analysis of a fish/temperature field database. *Ecol. Eng.* 4:289-305 #562
- Eaton, J. G., J. M. McKim, and G. W. Holcombe. 1978. Metal toxicity to embryos and larvae of seven freshwater fish species - I. Cadmium. *Bull. Environ. Contam. Toxicol.* 19:95-103 #172
- Eaton, J. G. and R. M. Scheller. 1996. Effects of climate warming on fish thermal habitat in streams of the United States. *Limnol. Oceanogr.* 41:1109-15 #609
- Eaton, J. G., W. A. Swenson, J. H. McCormick, T. D. Simonson, and K. M. Jensen. 1992. A field and laboratory investigation of acid effects on largemouth bass, rock bass, black crappie and yellow perch. *Trans. Am. Fish. Soc.* 121:644-58 #472
- Eaton, J. and B. Coffin. 1978. Impacts of acidification on aquatic ecosystems. Unpublished draft report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1978-5
- Eaton, J.G. 1973. Organophosphate and carbamate pesticides and their relation to freshwater fish and aquatic invertebrates. In: *Proceedings of the 53rd Annual Conference of Western Association of State Game and Fish Commissioners*, July 11-13, 1973, Salt Lake City, UT. Pp. 472-479.

#1973-21

- Eaton, J.G. 1973. Recent developments in the use of laboratory bioassays to determine "safe" levels of toxicants for fish. In: *Bioassays techniques and environmental chemistry*. G.E. Glass, ed. Pp. 107-115. Ann Arbor Science, Ann Arbor, MI. #1973-18
- Eaton, J.G. 197? Recommendations of the National Water Quality Laboratory on oxygen and temperature standards for the State of Virginia. Unpublished presentation. National Water Quality Laboratory, Duluth, MN. #197?-21
- Eaton, J.G. 197? Stomach analyses of fourhorn, *Myoxocephalus quadricornis* (Linnaeus), and slimy, *Cottus cognatus* Richardson, sculpins from four areas along the north shore of Lake Superior. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-22
- Eaton, J.G., J.W. Arthur, R.O. Hermanutz, R. Kiefer, L.H. Mueller, R.L. Anderson, R.J. Erickson, B.R. Nordling, J.W. Rogers, and H. Pritchard. 1985. Biological effects of continuous and intermittent dosing of outdoor experimental streams with chlorpyrifos. In: *Aquatic toxicology and hazard assessment: Eighth symposium*. R.C. Bahner and D.J. Hansen, eds. Pp. 85-118. ASTM STP 891. American Society for Testing and Materials, Philadelphia, PA. #1985-23
- Edwardson, K.J., W.B. Bowden, C. Dahm, and J. Morrice. 2003. The hydraulic characteristics and geochemistry of hyporheic and parafluvial zones in Arctic tundra streams, north slope, Alaska. *Advances in Water Resources*, 26:907-923. #2003-12
- Effler, S.W. and M.T. Auer. 1987. Optical heterogeneity in Green Bay. *Water Resources Bulletin* 2(5):937-941. #1987-44
- Eilers, J. M., G. E. Glass, A. K. Pollack, and J. A. Sorensen. 1989. Changes in conductivity, alkalinity, calcium, and pH during a 50-year period in selected northern Wisconsin lakes. *Can. J. Fish. Aquat. Sci.* 46:1929-44 #386
- Eilers, J. M., G. E. Glass, K. E. Webster, and J. A. Rogalla. 1983. Hydrological control of lake susceptibility to acidification. *Can. J. Fish. Aquat. Sci.* 40:1896-904 #260
- Eilers, J.M., G.J. Lien, and R.G. Berg. 1984. Aquatic organisms in acidic environments: A literature review. Technical Bulletin No. 150. Department of Natural Resources, Madison, WI. #1984-13
- Eisenreich, S. J.; Emmeling, P. J., and Beeton, A. M. Determination of atmospheric phosphorus addition to Lake Michigan. EPA 600/3-80/063. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803238. Project officer: M.D. Mullin
- El-Shaarawi, A.H. and D.M. Dolan. 1989. Maximum likelihood estimation of water quality concentrations from censored data. *Can. J. Fish. Aquat. Sci.* 46:1033-1039. #1989-12
- Ellis, B.K. and J.A. Stanford. 1988. Nutrient subsidy in montane lakes: Fluvial sediments versus volcanic ash. *Verh. Internat. Verein. Limnol.* 23:327-340. #1988-31
- Ellis, B.K. and J.A. Stanford. 1988. Phosphorus bioavailability of fluvial sediments determined by algal assays. *Hydrobiologia* 160:9-18. #1988-5
- Elonen, C. M., R. L. Spehar, G. W. Holcombe, R. D. Johnson, J. D. Fernandez, R. J. Erickson, J. E. Tietge, and P. M. Cook. 1998. Comparative toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin to seven freshwater fish species during early life-stage development. *Environ. Toxicol. Chem.* 17:472-83 #669
- Elser, A. A. and Schreiber, J. C. Environmental effects of western coal combustion. Part I - The fishes of Rosebud Creek, Montana. EPA 600/3-78/098. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Emmert, G., E.F. Stoermer, and G.W. Fowler. 199? Effect of sample size on cluster analysis, estimates of diversity, and relative abundance: An empirical study using computer-simulated counts of diatom assemblages. Submitted to *Journal of Paleolimnology*. #199?-5
- Endicott, D.D. and J.P. Connolly. 1992. Process parameterization uncertainty in models of toxics in the Great Lakes. Part 1: Process parameterization in chemical mass balance models. Prepared for the Workshop on Reducing Uncertainty in Mass Balance Models of Toxics in the Great Lakes, February 3-5, 1992, Buffalo, NY. #1992-26
- Endicott, D.D. and P. M. Cook. 1994. Modeling the partitioning and bioaccumulation of TCDD and other hydrophobic organic chemicals in Lake Ontario. *Chemosphere*. 28:75-87 #532
- Endicott, D.D., R.G. Kreis, Jr., L. Mackelburg, and D. Kandt. 1998. Modeling PCB bioaccumulation by the

- zebra mussel (*Dreissena polymorpha*) in Saginaw Bay, Lake Huron. *J. Great Lakes Res.* 24(2):411-426. #1998-5
- Endicott, D.D., M. Velleux, and K. Freeman. 1992. Development and calibration of a mass balance model for estimating the export of in-place pollutants from the lower Fox River to Green Bay. Unpublished report. U.S. EPA Large Lakes Research Station, Office of Research and Development, U.S. Environmental Protection Agency, Grosse Ile, MI. #1992-27
- Endicott, D.D., W.L. Richardson, and D.M. Di Toro. 198? Lake Ontario TCDD modeling report. Unpublished report. U.S. Environmental Protection Agency Research Laboratory, Duluth, MN. #198?-6
- Endicott, D.D., W.L. Richardson, and D.M. DiToro. 1990. Lake Ontario TCDD modeling report. In: Lake Ontario TCDD bioaccumulation study, final report. Chapter 8. Unpublished report. U.S. Environmental Protection Agency, New York State Department of Environmental Conservation, New York State Department of Health, and Occidental Chemical Corporation. #1990-18
- Endicott, D.D., W.L. Richardson, and D.J. Kandt. 1992. MICHTOX: A mass balance and bioaccumulation model for toxic chemicals in Lake Michigan. Draft report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1992-29
- Endicott, D.D., W.L. Richardson, T.F. Parkerton, and D.M. DiToro. 1990. A steady state mass balance and bioaccumulation model for toxic chemicals in Lake Ontario: Report to the Lake Ontario Fate of Toxics Committee. EPA/X-90-290. Internal report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1990-26
- Environmental inventory of lower St. Louis River covering proposed improvements to Duluth-Superior Harbor, Minnesota and Wisconsin -- Final report. 1976. Unpublished report by the Center for Lake Superior Environmental Studies of the University of Wisconsin--Superior. #1976-16
- Environmental Monitoring and Assessment Program (EMAP) : Great Lakes monitoring and research strategy. EPA 620/R-92/001. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Environmental Research Laboratory, Duluth, MN. Freshwater invertebrate bibliography: pollution, biology, methods. Unpublished paper. 1976. #1976-11
- Environmental Research Laboratory Duluth, MN. 198? ERL-D Ecosystem Research Program. Internal report submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #198?-12
- Erickson, R.J. 1985. An evaluation of mathematical models for the effects of pH and temperature on ammonia toxicity to aquatic organisms. *Water Res.* 19:1047-58 #295
- Erickson, R.J., G. T. Ankley, D. L. DeFoe, P. A. Kosian, and E. A. Makynen. 1999. Additive toxicity of binary mixtures of phototoxic polycyclic aromatic hydrocarbons to the oligochaete *Lumbriculus variegatus*. *Toxicol. Appl. Pharmacol.* 154:97-105 #694
- Erickson, R.J., D. A. Benoit, V. R. Mattson, H. P. Nelson, Jr., and E. N. Leonard. 1996. The effects of water chemistry on the toxicity of copper to fathead minnows. *Environ. Toxicol. Chem.* 15:181-93 #610
- Erickson, R.J., L. T. Brooke, M. D. Kahl, F. Vende Venter, S. L. Harting, T. P. Markee, and R. L. Spehar. 1998. Effects of laboratory test conditions on the toxicity of silver to aquatic organisms. *Environ. Toxicol. Chem.* 17:572-98 #672
- Erickson, R.J., C. F. Kleiner, J. T. Fiandt, and T. L. Highland. 1997. Effect of acclimation period on the relationship of acute copper toxicity to water hardness for fathead minnows. *Environ. Toxicol. Chem.* 16:813-15 #643
- Erickson, R.J. and J. M. McKim. 1990. A model for exchange of organic chemicals at fish gills: Flow and diffusion limitations. *Aquat. Toxicol.* 18:175-97 #415
- Erickson, R.J. and J. M. McKim. 1990. A simple flow-limited model for exchange of organic chemicals at fish gills. *Environ. Toxicol. Chem.* 9:159-65 #416
- Erickson, R.J. 1988. Recommendations concerning revision of the: Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-56
- Erickson, R.J., C. Kleiner, J. Fiandt, and T. Highland. 1989. Report on the feasibility of predicting the

- effects of fluctuating concentrations on aquatic organisms and possible application to water quality criteria. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-2
- Erickson, R.J., C. Kleiner, J. Fiandt, and T. Highland. 1991. Use of toxicity models to reduce uncertainty in aquatic hazard assessments: Effects of exposure conditions on pentachloroethane toxicity to fathead minnows. Internal report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1991-30
- Erickson, R.J. 1985. Analysis of major ionic content of selected U.S. waters and application to experimental design for the evaluation of the effect of water chemistry on the toxicity of copper. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1985-26
- Erickson, R.J. 1985. Evaluation of a model for the prediction of the effect of fluctuating concentrations on the lethality of copper to fathead minnows. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1985-7
- Erickson, R.J. 1989. Report on aquatic effects models for fluctuating transient exposures. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-43
- Erickson, R.J., D.A. Benoit, and V.R. Mattson. 1987. Effects of physical and chemical parameters of test water on acute toxicity of copper to larval fathead minnows. Presented before the Division of Environmental Chemistry, American Chemical Society, New Orleans, LA, August 30-September 4, 1987. #1987-1
- Erickson, R.J., D.A. Benoit, and V.R. Mattson. 1987. A prototype toxicity factors model for site-specific copper water quality criteria (September 5, 1996 revision). Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1987-2
- Erickson, R.J., T.D. Bills, J.R. Clark, D.J. Hansen, J. Knezoich, F.L. Mayer, Jr., and A.E. McElroy. 1994. Synopsis of discussion session on physiological factors affecting toxicity. In: *Bioavailability: Physical, chemical, and biological interactions*. J.L. Hamelink, P.F. Landrum, H.L. Bergman, and W.H. Benson, eds. Pp. 31-38. Lewis Publishers, Boca Raton, FL. #1994-8
- Erickson, R.J. and Stephan, C. E. Calculation of the final acute value for water quality criteria for aquatic organisms. EPA 600/3-88-018. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB88-214994).
- Erickson, T.R., O. Mohseni, and H.G. Stefan. 1998. Estimation of an upper bound for weekly stream temperatures. Grazing Lands Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, El Reno, OK. #1998-17
- Erickson, T.R., O. Mohseni, and H.G. Stefan. 1999. Required record length for a nonlinear weekly air/stream temperature regression model. Grazing Lands Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, El Reno, OK. #1999-22
- Erickson, T.R. and H.G. Stefan. 1996. Correlations of Oklahoma stream temperatures with air temperatures. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-33
- Eskuri, J., T.J. Norberg-King, and L. Anderson. 1991. Toxicity evaluation of artificial wetland discharge samples. NETAC Technical Report 19-91. National Effluent Toxicity Assessment Center, Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1991-27
- Etterson, M.A. 2003. Conspecific attraction in loggerhead shrikes: implications for habitat conservation and reintroduction. *Biological Conservation*, 114:199-205. #2003-4
- Ettinger, M.B. and D.I. Mount. 1967. A wild fish should be safe to eat. *Environ. Science Tech.*, 1:203-205. #1967-5
- Evans, M.S. and D.C. McNaught. 1988. The effects of toxic substances on zooplankton populations: A Great Lakes perspective. In: *Toxic contaminants and ecosystem health: A Great Lakes focus*. Evans, M.S., ed. John Wiley and Sons, Inc., New York, NY. Pp. 53-76. #1988-22
- Everhart, W. H. and Freeman, R. A. Effects of chemical variations in aquatic environments. Volume II: Toxic effects of aqueous aluminum to rainbow trout. EPA R3-73/011b. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Grant # WP-01398-01. Project officer: J.H. McCormick
- Everhart, W. H. and May, B. E. Effects of chemical variations in aquatic environments. Volume I: Biota

and chemistry of Piceance Creek. EPA R3-73/011a. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Grant # WP-01398-01. Project officer: J.H. McCormick

F

- Fairbrother, A., G.T. Ankley, L.S. Birnbaum, S.P. Bradbury, B. Francis, L.E. Gray, D. Hinton, L.L. Johnson, R.E. Peterson, and G. Van Der Kraak. 1999. Reproductive and developmental toxicology of contaminants in oviparous animals. In: *Reproductive and Developmental Effects of Contaminants in Oviparous Vertebrates*, Di Giulio, R.T. and Tillitt, D.E., eds., pp. 283-361. SETAC Press, Pensacola, FL. #1999-7
- Fairbrother, A. and R.S. Bennett. 1999. Ecological risk assessment and the precautionary principle. *Hum. Ecol. Risk Assess.*, 5(5):943-949. #1999-9
- Fairbrother, A. and J. Fowles. 1989. Selenium immunotoxicity in mallards. No EPA number. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Corvallis, OR. #1989-60
- Fairchild, D. J. and J. H. McCormick. 1996. Effects of temperature on hatching and development of ruffe (*Gymnocephalus cernuus*). *J. Great Lakes Res.* 22:89-94 #611
- Fairchild, J.F., D. S. Ruessler, and A. R. Carlson. 1998. Comparative sensitivity of five species of macrophytes and six species of algae to atrazine, metribuzin, alachlor, and metolachlor. *Environ. Toxicol. Chem.* 17:1830-1834 #688
- Fairchild, J. F., D. S. Ruessler, P. S. Haverland, and A. R. Carlson. 1997. Comparative sensitivity of *Selenastrum capricornutum* and *Lemna minor* to sixteen herbicides. *Arch. Environ. Contam. Toxicol.* 32:353-57 #651
- Fairchild, J.F., M. Ort, S. Ruessler, A. Carlson, W. Donald, and J. Hatfield. 1993. Bioavailability and toxicity of agricultural chemicals in runoff from MSEA sites: Ecological impacts on non-target aquatic organisms. In: *Agricultural research to protect water quality*. Proceedings, February 21-24, 1993, Minneapolis, MN. Pp. 133-136. Soil and Water Conservation Society, Ankeny, IA. #1993-17
- Fairchild, J.F., D. S. Ruessler, M. Nelson, and P. Haverland. 1994. Bioavailability and toxicity of agricultural chemicals in runoff from MSEA sites: Potential impacts on non-target aquatic organisms: An aquatic hazard assessment of four herbicides using six species of algae and five species of aquatic macrophytes. Final report for IAG DW14935600-01-2. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1994-15
- Fang, X., H. G. Stefan, J. G. Eaton, J. H. McCormick, and S. R. Alam. 2004. Simulation of thermal/dissolved oxygen habitat for fishes in lakes under different climate scenarios. Part I: Cool-water fish in the contiguous US. *Ecol. Modell.* 172:13-37 #813
- Fang, X., H. G. Stefan, J. G. Eaton, J. H. McCormick, and S. R. Alam. 2004. Simulation of thermal/dissolved oxygen habitat for fishes in lakes under different climate scenarios. Part II: Cold-water fish in the contiguous US. *Ecol. Modell.* 172:39-54 #814
- Fang, X., H. G. Stefan, J. G. Eaton, J. H. McCormick, and S. R. Alam. 2004. Simulation of thermal/dissolved oxygen habitat for fishes in lakes under different climate scenarios. Part III: Warm-water fish in the contiguous US. *Ecol. Modell.* 172:55-68 #815
- Fang, X. and H.G. Stefan. 1996. Development and validation of the water quality model MINLAKE96 with winter data. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1996-32
- Fang, X. and H.G. Stefan. 1994. Modeling of dissolved oxygen stratification dynamics in Minnesota lakes under different climate scenarios. Project Report No. 339, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis, MN. Prepared for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1994-12
- Fang, X. and H.G. Stefan. 1994. Temperature and dissolved oxygen simulations for a lake with ice cover. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1994-29
- Fang, X., H.G. Stefan, and M.B. Davis. 1993. Status of climate change effect simulations for Mirror Lake, New Hampshire. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1993-31
- Fay, L.A., M. Gessner, P.C. Strombert, and J. Hageman. 1987. Effects of toxic substances on growth, mortality, and pathology of larval fishes in the River Raisin, Michigan. CLEAR Technical Report

- No. 303. Center for Lake Erie Area Research, Ohio State University, Columbus, OH. #1987-3
- Featherstone, D., C.D. Drewes, and J.R. Coats. 1991. Noninvasive detection of electrical events during the startle response in larval medaka. *J. exp. Biol.* 158:583-589. #1991-12
- Featherstone, D., C.D. Drewes, J.R. Coats, and S.P. Bradbury. 1993. A non-invasive neurotoxicity assay using larval medaka. In: *Environmental toxicology and risk assessment, 2nd vol.* J.W. Gorsuch, F.J. Dwyer, C.G. Ingersoll, and T.W. La Point, eds. Pp. 275-288. ASTM STP 1216. American Society for Testing and Materials, Philadelphia, PA. #1993-12
- Fernandez, J. D., P. M. Cook, B. C. Butterworth, and S. P. Bradbury. 1999. Temporal changes in purity and specific activity of tritium-labeled 2,3,7,8-tetrachlorodibenzo-p-dioxin: radiopurity model for toxicology. *Environ. Sci. Technol.* 33:3558-67 #722
- Fernandez, J. D., J. S. Denny, and J. E. Tietge. 1998. A simple apparatus for administering 2,3,7,8-tetrachlorodibenzo-p-dioxin to commercially available pelletized fish food. *Environ. Toxicol. Chem.* 17:2058-62 #686
- Filkins, J.C., V.E. Smith, and S.G. Rood. 1994. Sediment sampling surveys. In: *Assessment and Remediation of Contaminated Sediments (ARCS) Program -- Assessment Guidance Document*, pp. 33-56. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL. EPA 905/B-94/002. #1994-23
- Fisher, J.B., R.L. Petty, and W. Lick. 1983. Release of polychlorinated biphenyls from contaminated lake sediments: Flux and apparent diffusivities of four individual PCBs. *Environmental Pollution (Series B)* 5:121-132. #1983-4
- Fitzsimmons, P. N., J. D. Fernandez, A. D. Hoffman, B. C. Butterworth, and J. W. Nichols. 2001. Branchial elimination of superhydrophobic organic compounds by rainbow trout (*Oncorhynchus mykiss*). *Aquat. Toxicol.* 55:23-34 #764
- Flexner, M.C. 1988. A diel study of the impact of water quality on larval yellow perch *Perca flavescens* (Mitchell) and other biota in the Trenton Channel of the Detroit River, 1986 (appendix 0). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix O. #1988-4
- Flum, T.F. and L.J. Shannon. 1987. The effects of three related amides on microecosystem stability. *Ecotoxicology and Environmental Safety* 13:239-252. #1987-29
- Freeman, J. A., J. V. Johnson, M. E. Hail, R. A. Yost, and D. W. Kuehl. 1990. Estimation of mutagenic/carcinogenic potential of environmental contaminants by ion-molecule reactions and tandem mass spectrometry. *Am. Soc. Mass Spectrom.* 1:110-115 #417
- Freeman, J. A., J. V. Johnson, R. A. Yost, and D. W. Kuehl. 1994. Gas-phase ion-molecule reactions: A model for the determination of biologically reactive electrophilic contaminants in the environment. *Anal. Chem.* 66:1902-10 #533
- French, J.B., Jr., S.P. Bradbury, H. Krueger, E. McGee, and B.E. Sample. 2000. Group A discussions of endpoint selection, study design, and extrapolation. In: *Environmental Contaminants and Terrestrial Vertebrates: Effects on Populations, Communities, and Ecosystems*. Albers, P.H., Heinz, G.H., Ohlendorf, H.M., eds. pp. 189-201. SETAC Press, Pensacola, FL. #2000-11
- Frissell, C.A., J.L. Ebersole, W.J. Liss, B.J. Cavallo, G.C. Poole, and J.A. Stanford. 199? Potential effects of climate change on thermal complexity and biotic integrity of streams: seasonal intrusion of non-native fishes. Unpublished report. Environmental Research Laboratory-Duluth, U.S. Environmental Protection Agency, Duluth, MN. #199?-6
- Froese, K. L., D. A. Verbrugge, G. T. Ankley, G. J. Niemi, C. P. Larsen, and J. P. Giesy. 1998. Bioaccumulation of polychlorinated biphenyls from sediments to aquatic insects and tree swallow eggs and nestlings in Saginaw Bay, Michigan USA. *Environ. Toxicol. Chem.* 17:484-92 #671
- Fromm, P. O. Toxic effects of water soluble pollutants on freshwater fish. EPA 600/3-77/057. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # 801034. Project officer: J.M. McKim
- Frost, T.M. and P.K. Montz. 1988. Early zooplankton response to experimental acidification in Little Rock Lake, Wisconsin, USA. *Verh. Internat. Verein. Limnol.* 23:2279-2285. #1988-58
- Frumkin, G.T., G.M. Chuiko, D.F. Pavlov, and O.V. Menzykova. 1992. New rapid method to evaluate the median effect concentrations of xenobiotics in hydrobionts. *Bull. Environ. Contam. Toxicol.*

49:361-367. #1992-24

- Fryer, J. L.; Pilcher, K. S.; Sanders, J. E.; Rohovec, J. S.; Zinn, J. L.; Groberg, W. J., and McCoy, R. H. Temperature, infectious diseases, and the immune response in salmonid fish. EPA 600/3-76/021. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R-800171 . Project officer: G.R. Bouck
- Furlong, E.T., D.S. Carter, and R.A. Hites. 1988. Organic contaminant measurements in Detroit River sediments (Appendix E). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix E. #1988-4
- Furlong, E.T., D.S. Carter, and R.A. Hites. 1988. Organic contaminants in sediments from the Trenton Channel of the Detroit River, Michigan. *J. Great Lakes Res.* 14(4):489-501. #1988-9
- G
- Gailani, J., W. Lick, C.K. Ziegler, and D. Endicott. 1996. Development and calibration of a fine-grained sediment transport model for the Buffalo River. *J. Great Lakes Res.* 22(3):765-778. #1996-8
- Gao, S. and H.G. Stefan. 1998. Observed and simulated ice characteristics of five freshwater lakes and extrapolation to a projected 2xCO₂ climate scenario. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC and Environmental Research Laboratory, Office of Research and Development, Mid-Continent Ecology Division, U.S. Environmental Protection Agency, Duluth, MN . #1998-16
- Gast, M. H. and W. A. Brungs. 1973. A procedure for separating eggs of the fathead minnows. *Prog. Fish-Cult.* 35:54 #86
- Geckler, J.R., W.B. Horning, T.M. Neiheisel, Q.H. Pickering, E.L. Robinson, and C.E. Stephan. 1976. Validity of laboratory tests for predicting copper toxicity in streams. EPA 600/3-76-116. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1976-9
- Geckler, J. R.; Horning, W. B.; Neiheisel, T. M.; Pickering, Q. H.; Robinson, E. L., and Stephan, C. E. Validity of laboratory tests for predicting copper toxicity in streams. EPA 600/3-76-116. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Gensemer, R.W., R.B. Naddy, W.A. Stubblefield, J.R. Hockett, R. Santore, and P. Paquin. 2002. Evaluating the role of ion composition on the toxicity of copper to *Ceriodaphnia dubia* in very hard waters. *Comp. Biochem. Physiol. Part C*, 133:87-97. #2002-9
- Gerhart, E. H., R. J. Liukkonen, R. M. Carlson, G. N. Stokes, M. T. Lukasewycz, and A. R. Oyler. 1981. Histological effects and bioaccumulation potential of coal particulate-bound phenanthrene in the fathead minnow *Pimephales promelas*. *Environ. Pollut. Ser. A*. 25:165-80 #220
- Gerhart, D. Z.; Richter, J. E.; Curran, S. J., and Robertson, T. E. Algal bioassays with leachates and distillates from western coal. EPA 600/3-80/051. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803932.
- Gerloff, G. C. and Fitzgerald, G. P. The nutrition of Great Lakes Cladophora. EPA 600/3-76/044. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant No. R-802464. Project officer: N.A. Thomas
- Gerloff, G. C. Plant analysis for nutrient assay of natural waters. EPA R1-73-001. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Project # 18040 DGI. Project officer: G. Glass
- Giesy, J. P., R. L. Graney, J. L. Newsted, C. J. Rosiu, A. Benda, R. G. Kreis, and F. J. Horvath. 1988. Comparison of three sediment bioassay methods using Detroit River sediments. *Environ. Toxicol. Chem.* 7:483-98 #361
- Giesy, J. P., C. J. Rosiu, R. L. Graney, J. L. Newsted, A. Benda, R. G. Kreis, and F. J. Horvath. 1988. Toxicity of Detroit River sediment interstitial water to the bacterium *Photobacterium phosphoreum*. *J. Great Lakes Res.* 14:502-13 #362
- Giesy, J.P., R.L. Graney, J.L. Newsted, and C.J. Rosiu. 1989. Toxicity of sediments in the Detroit River, Michigan: 1986. Internal report. Environmental Research Laboratory, U.S. Environmental

Protection Agency, Duluth, MN. #1989-49

- Giesy, J.P., R.L. Graney, J.L. Newsted, C.J. Rosiu, and A. Benda. 1988. A comparison of three sediment bioassay methods for Detroit River sediments (Appendix J). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. R.G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix J. #1988-4
- Giesy, J.P., R.L. Graney, J.L. Newsted, C.J. Rosiu, A. Benda, R.G. Kreis, Jr., and F.J. Horvath. 1988. Comparison of three sediment bioassay methods using Detroit River sediments. *Environ. Toxicol. Chem.* 7:483-498. #1988-25
- Giesy, J.P. and R.A. Hoke. 1989. Freshwater sediment toxicity bioassessment: Rationale for species selection and test design. *J. Great Lakes Res.* 15(4):539-569. #1989-9
- Giesy, J.P., C.J. Rosiu, and R.L. Graney. 1990. Benthic invertebrate bioassays with toxic sediment and pore water. *Environ. Toxicol. Chem.* 9:233-248. #1990-6
- Giesy, J.P., C.J. Rosiu, R.L. Graney, J.L. Newsted, and A. Benda. 1988. Detroit River sediment toxicity (Appendix I). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. R.G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix I. #1988-4
- Giesy, J.P., C.J. Rosiu, R.L. Graney, J.L. Newsted, A. Benda, R.G. Kreis, Jr., and F.J. Horvath. 1988. Toxicity of Detroit River sediment interstitial water to the bacterium *Photobacterium phosphoreum*. *J. Great Lakes Res.* 14(4):502-513. #1988-26
- Gillett, J. W.; Hill, J., IV; Jarvinen, A. W., and Schoor, W. P. A conceptual model for the movement of pesticides through the environment : a contribution of the EPA Alternative Chemicals Program. EPA 660/3-74-024. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Program Element # 1EA487.
- Gingerich, W. H. and Weber, L. J. Assessment of clinical procedures to evaluate liver intoxication in fish. EPA 600/3-79/088. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803090.
- Glass, G. E. 1977. Identification and distribution of inorganic components in water: What to measure? *Ann. N.Y. Acad. Sci.* 298:31-46 #148
- Glass, G. E., E. N. Leonard, W. H. Chan, and D. B. Orr. 1986. Airborne mercury in precipitation in the Lake Superior region. *J. Great Lakes Res.* 12:37-51 #316
- Glass, G. E. and O. L. Loucks. 1986. Implications of a gradient in acid and ion deposition across the northern Great Lakes states. *Environ. Sci. Technol.* 20:35-43 #317
- Glass, G. E. and J. E. Poldoski. 1975. Interstitial water components and exchange across the water sediment interface of western Lake Superior. *Int. Ver. Theor. Angew.-Limnol. Verh.* 19:405-20 #118
- Glass G.E. and J. A. Sorensen. 1999. Six-year trend (1990-1995) of wet mercury deposition in the Upper Midwest, U.S.A. *Environ. Sci. Technol.* 33:3303-12 #719
- Glass, G. E., J. A. Sorensen, B. W. Liukkonen, G. R. Rapp, Jr., and O. L. Loucks. 1986. Ionic composition of acid lakes in relation to airborne inputs and watershed characteristics. *Water Air Soil Pollut.* 31:1-15 #318
- Glass, G. E., J. A. Sorensen, K. W. Schmidt, and G. R. Rapp, Jr. 1990. New source identification of mercury contamination in the Great Lakes. *Environ. Sci. Technol.* 24:1059-69 #418
- Glass, G. E., J. A. Sorensen, K. W. Schmidt, G. R. Rapp, Jr., D. Yap, and D. Fraser. 1991. Mercury deposition and sources from the upper Great Lakes region. *Water Air Soil Pollut.* 56:235-49 #450
- Glass, G.E. 1986. Acid rain clouds over the Midwest: Impacts on waters. Presented at the Conference on Acid Rain: Clouds Over the Midwest - Science and Solutions, Chicago, IL, March 7, 1986. #1986-3
- Glass, G.E. 1973. Analysis and laboratory experiments with taconite tailings report. Data report.

- National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-9
- Glass, G.E. 1990. Assessing municipal impacts on a Lake Superior estuary. In: *Making a Great Lake Superior*. J. Vander Wal and P.D. Watts, eds. Pp. 201-217. Occasional Paper #9. Lakehead University Centre for Northern Studies, Thunder Bay, Ontario. #1990-14
- Glass, G.E. 1970. The dissolution of taconite tailings in Lake Superior. Unpublished report. National Water Quality Laboratory, Federal Water Quality Administration, Duluth, MN. #1970-3
- Glass, G.E. 1978. Ecological effects of coal-fired steam-electric generating stations. In: EPA 600/9-78/022. Decision series. Energy Environment III. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC. pp. 121-149. #1978-16
- Glass, G.E. 1977. Organic contaminants. In: *The waters of Lake Huron and Lake Superior, vol. II(part B): Lake Huron, Georgian Bay, and the North Channel*. G.E. Glass, W.M.I. Strachan, W.A. Willford, F.A.I. Armstrong, K.L.E. Kaiser, and A. Lutz, eds. Pp. 577-590; 667-670. International Joint Commission, Windsor, Ontario. #1977-9
- Glass, G.E. 1973. Residue analysis of Lake Superior sculpins. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-8
- Glass, G.E. 1973. A study of western Lake Superior: Surface sediments, interstitial water and exchange of dissolved components across the water-sediment interface. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-7
- Glass, G.E. and T.G. Brydges. 1982. Problem complexity in predicting impacts from altered precipitation chemistry. In: *Acid Rain/Fisheries*, Johnson, R.E., ed. pp. 265-286, American Fisheries Society, Bethesda, MD . #1982-24
- Glass, G.E. and J.E. Poldoski. 1974. Interstitial water components and exchange across the water sediment interface of western Lake Superior. Presented at XIX Congress, International Association of Limnology, Winnipeg, Canada, August 22-29, 1974. #1974-2
- Glass, G.E., J.A. Sorensen, and G.R. Rapp, Jr. 1992. Mercury sources and distribution in Minnesota's aquatic resources: Precipitation, surface water, sediments, plants, plankton, and fish. Executive summary. In: *Mercury in the St. Louis River, Mississippi River, Crane Lake, and Sand Point Lake: Cycling, distribution, and sources*. Pp. 1-6. Report to the Legislative Commission on Minnesota Resources. Water Quality Division, Minnesota Pollution Control Agency, St. Paul, MN. #1992-15
- Glass, G.E., J.A. Sorensen, and G.R. Rapp, Jr. 2001. Methylmercury bioaccumulation dependence on northern pike age and size in 20 Minnesota lakes. In: *Persistent, Bioaccumulative, and Toxic Chemicals I : fate and exposure*. Lipnick, R.L., Hermens, J.L.M., Jones, K.C. and Muir, D.C.G., eds., pp. 150-163, American Chemical Society, Washington, DC. #2001-1
- Glass, G.E., J.A. Sorensen, G.R. Rapp, Jr., M. Balcer, and L. Schwarzkopf. 1999. Mercury subsurface maxima in sediments : a diagnostic for anthropogenic origins. In: *Mercury contaminated sites : characterization, risk assessment, and remediation*. Ebinghaus, R., et al, eds. pp 467-485. Springer-Verlag, Berlin, Heidelberg. #1999-1
- Glass, G.E., J.A. Sorensen, K.W. Schmidt, J.K. Huber, and G.R. Rapp, Jr. 1992. Mercury sources and distribution in Minnesota's aquatic resources: Surface water, sediments, plants, plankton and fish. In: *Mercury in the St. Louis River, Mississippi River, Crane Lake, and Sand Point Lake: Cycling, distribution, and sources*. Pp. 3.1-3.48. Report to the Legislative Commission on Minnesota Resources. Water Quality Division, Minnesota Pollution Control Agency, St. Paul, MN. #1992-16
- Glass, G.E., J.A. Sorensen, K.W. Schmidt, G.R. Rapp, Jr., D. Yap, and D. Fraser. 1992. Mercury sources and distribution in Minnesota's aquatic resources: Deposition. In: *Mercury in the St. Louis River, Mississippi River, Crane Lake, and Sand Point Lake: Cycling, distribution, and sources*. Pp. 4.1-4.23+. Report to the Legislative Commission on Minnesota Resources. Water Quality Division, Minnesota Pollution Control Agency, St. Paul, MN. #1992-17
- Glass, G.E., W.M.I. Strachan, W.A. Willford, F.A.I. Armstrong, K.L.E. Kaiser, and A. Lutz. 1977. Organic contaminants. In: *The waters of Lake Huron and Lake Superior, vol. III (part B): Lake Superior*. M.P. Bratzel, Jr., M.E. Thompson, and R.J. Bowden, eds. Pp. 417-429; 499-502. International Joint Commission, Windsor, Ontario. #1977-8
- Glass, G. E. and Loucks, O. L., eds. Impacts of airborne pollutants on wilderness areas along the Minnesota-Ontario border. EPA 600/3-80/044. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. Project officer: G.E. Glass
- Glass, N. R., G. E. Glass, and P. J. Rennie. 1980. Effects of acid precipitation in North America. *Environ.*

Int. 4:443-52 #202

- Glass, N.R., G.E. Glass, and P.J. Rennie. 1979. Effects of acid precipitation. *Environ. Sci. Technol.*, 13(11):1350-1355. #1979-6
- Goettl, J. P., Jr. and Edde, J. W. Environmental effects of oil shale mining and processing. Part I - Fishes of Piceance Creek, Colorado, prior to oil shale processing. EPA 600/3-78/096. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Goettl, J. P., Jr. and Edde, J. W. Fish distribution in Trout Creek, Colorado, 1975-1976. EPA 600/3-80-070. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (Environmental effects of western coal surface mining. Part VIII): Grant # R803950. Project officer: D.I. Mount
- Goodfellow, W.L., L.W. Ausley, D.T. Burton, D.L. Denton, P.B. Dorn, D.R. Grothe, M.A. Heber, T.J. Norberg-King, and J.H. Rodgers, Jr. 2000. Major ion toxicity in effluents: a review with permitting recommendations. *Environ. Toxicol. Chem.*, 19(1):175-182. #2000-15
- Goran, D. and Kosian, P. Influence of diet and body lipids on the bioconcentration of endrin from water in the fathead minnow (*Pimephales promelas*). EPA 600/3-83/077. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB83-254300): Grant # CR 806860. Project officer: J.M. McKim
- Gore, J. A., J. R. Kelly, and J. D. Yount. 1990. Application of ecological theory to determining recovery potential of disturbed lotic ecosystems: Research needs and priorities. *Environ. Manage.* 14:755-62 #419
- Gorski, P.R., L.B. Cleckner, J.P. Hurley, M.E. Sierszen, and D.E. Armstrong. 2003. Factors affecting enhanced mercury bioaccumulation in inland lakes of Isle Royale National Park, USA. *The Science of the Total Environment*, 304(1-3):327-348. #2003-3
- Gray, L. E., Jr., J. Ostby, V. Wilson, C Lambright, K. Bobseine, P. Hartig, A. Hotchkiss, C. Wolf, J. Furr, M. Price, L. Parks, R. L. Cooper, T. E. Stoker, S. C. Laws, S. J. Degitz, K. M. Jensen, M. D. Kahl, J. J. Korte, E. A. Makynen, J. E. Tietge, and G. T. Ankley. 2002. Xenoendocrine disruptors-tiered screening and testing filling key data gaps. *Toxicology*. 181-182:371-82 #780
- Gray, L. J. and Ward, J. V. Environmental effects of oil shale mining and processing. Part II - The aquatic macroinvertebrates of the Piceance basin, Colorado, prior to oil shale processing. EPA 600/3-78/097. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Great Lakes Laboratory. An investigation of the nearshore region of Lake Ontario IFYGL. EPA 600/3-76/115. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800701. Project officer: N. Thomas
- Great Lakes Laboratory. Lake Erie nutrient control : effectiveness regarding assessment in eastern basin. EPA 600/3-80/067. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802706. Project officer: M.D. Mullin
- Green, J.C., C.D. Grant, and B.A. Neubert. 1974. Bibliography of water, land and socioeconomic information. Lake Superior Basin Studies Center, University of Minnesota-Duluth, Duluth, MN. #1974-4
- Greenberg, E. and C.J. Watras. 1989. Field evaluation of a micro-extraction technique for measuring chlorophyll in lakewater without filtration. *Hydrobiologia* 173:193-197. #1989-28
- Gueldner, D. R.; Pilli, A.; Crane, J. L., and Sivertson, D. J. CETIS : Complex Effluents Toxicity Information System : CETIS retrieval system user's manual. EPA 600/8-84/030. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, CR 807240.
- Guidelines for deriving site-specific sediment quality criteria for the protection of benthic organisms. Unpublished report. 1993. Health and Ecological Criteria Division, Office of Science and Technology, U.S. Environmental Protection Agency, Washington, DC. #1993-30
- Guiney, P. D., P. M. Cook, J. M. Casselman, J. D. Fitzsimmons, H. A. Simonin, E. W. Zabel, and R. E. Peterson. 1996. Assessment of 2,3,7,8-tetrachlorodibenzo-p-dioxin induced sac fry mortality in lake trout (*Salvelinus namaycush*) from different regions of the Great Lakes. *Can. J. Fish. Aquat. Sci.* 53:2080-2092 #637
- Gulliver, J.S. and H.G. Stefan. 1984. Stream productivity analysis with DORM-I : development of

- computational model. *Water Res.*, vol. 18, no. 12, pp. 1569-1576. #1984-20
- Gulliver, J.S. and H.G. Stefan. 1984. Stream productivity analysis with DORM-II : parameter estimation and sensitivity. *Water Res.*, vol. 18, no. 12, pp. 1577-1588. #1984-21
- Gulliver, J.S. and H.G. Stefan. 1984. Stream productivity analysis with DORM-III : productivity of experimental streams. *Water Res.*, vol. 18, no. 12, pp. 1589-1595. #1984-22
- Gumtz, G. D.; Jordan, D. M., and Waller, R. Characterization of vessel wastes in Duluth-Superior Harbor. EPA 670/2-74/097. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH, Grant no. R-802772. Project officer: W.J. Librizzi, Jr.
- Gurka, D. F., R. Titus, K. Robins, A. Wong, C. J. Wurrey, J. R. Durig, Z. Shen, and L. P. Burkhard. 1996. Environmental analysis by *ab initio* quantum mechanical computation and gas chromatography/Fourier transform infrared spectrometry. *Anal. Chem.* 68:4221-27 #638
- H
- Hagley, C.A. and D.L. Taylor. 1991. An approach for evaluating numeric water quality criteria for wetlands protection. Submitted to U.S. Environmental Protection Agency Research Laboratory, Duluth, MN by Asci Corporation, Duluth, MN. #1991-1
- Hahn, M.G., J.S. Gulliver, and H.G. Stefan. 1978. Physical characteristics of the experimental field channels at the USEPA Ecological Research Station in Monticello, MN. Submitted to U.S. Environmental Protection Agency Research Laboratory, Duluth, MN by St. Anthony Falls Hydraulic Laboratory, University of Minnesota. #1978-2
- Haile, C. L.; Veith, G. D.; Lee, G. F., and Boyle, W. C. Chlorinated hydrocarbons in the Lake Ontario ecosystem (IFYGL). EPA 660/3-75/022. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, (PB-243 364): Grant # 800608. Project officer: M.D. Mullin
- Hale, J. G. 1970. Culture of lake herring in the laboratory. *Prog. Fish-Cult.* 32:217-21 #42
- Hale, J. G. 1968. Observations on brook trout, *Salvelinus fontinalis* spawning in 10-gallon aquaria. *Trans. Am. Fish. Soc.* 97:299-300 #17
- Hale, J. G. 1970. White sucker spawning and culture of the young in the laboratory. *Prog. Fish-Cult.* 32:169 #43
- Hale, J. G. and A. R. Carlson. 1972. Culture of the yellow perch in the laboratory. *Prog. Fish-Cult.* 34:195-98 #67
- Hale, J. G. and D. A. Hilden. 1970. The influence of flow on the spawning of brook trout in the laboratory. *Trans. Am. Fish. Soc.* 99:595-97 #44
- Hale, J. G. and D. A. Hilden. 1969. Spawning and some aspects of early life history of brook trout, *Salvelinus fontinalis* (Mitchill), in the laboratory. *Trans. Am. Fish. Soc.* 98:473-77 #27
- Hale, J.G. 197? White sucker spawning and culture of the young in the laboratory. Unpublished report. #197?-8
- Hall, L.H. and L.B. Kier. 1989. Estimation of environmental and toxicological properties: Approach and methodology. *Environmental Toxicology and Chemistry* 8:19-24. #1989-25
- Hall, L.H. and L.B. Kier. 1984. Molecular connectivity of phenols and their toxicity to fish. *Bull. Environ. Contam. Toxicol.* 32:354-362. #1984-9
- Hall, L.H. and L.B. Kier. 1986. A molecular connectivity study of phenols and their toxicity to fish. In: *QSAR of phenolic toxicities*. Pp. 53-59???. #1986-21
- Hall, L.H. and L.B. Kier. 1986. Structure-activity relationship studies on the toxicities of benzene derivatives: II. An analysis of benzene substituent effects on toxicity. *Environmental Toxicology and Chemistry* 5:333-337. #1986-23
- Hall, L.H., E.L. Maynard, and L.B. Kier. 1989. QSAR investigation of benzene toxicity to fathead minnow using molecular connectivity. *Environmental Toxicology and Chemistry* 8:783-788. #1989-23
- Hall, L.H., E.L. Maynard, and L.B. Kier. 1989. Structure-activity relationship studies on the toxicities of benzene derivatives: III. Predictions and extension to new substituents. *Environmental Toxicology and Chemistry* 8:431-436. #1989-24
- Hall, L. H., L. B. Kier, and G. L. Phipps. 1984. Structure-activity relationship studies on the toxicities of benzene derivatives: I. An additivity model. *Environ. Toxicol. Chem.* 3:355-65 #275
- Hall, R.J., C.T. Driscoll, and G.E. Likens. 1987. Importance of hydrogen ions and aluminium in regulating the structure and function of stream ecosystems: An experimental test. *Freshwater Biology* 18:17-43. #1987-28

- Hall, R.J. and G.E. Likens. 1981. Chemical flux in an acid-stressed stream. *Nature* 292:329-331. #1981-10
- Hall, R.J. and G.E. Likens. 1980. Ecological effects of experimental acidification on a stream ecosystem. In: *Ecological impact of acid precipitation*. D. Drablos and A. Toman, eds. SNSF Project, Oslo. Pp. 375-376. #1980-11
- Hall, R.J. and G.E. Likens. 1982. Experimental acidification of a stream tributary to Hubbard Brook. Project summary, Cooperative Agreement #CR-807104. Submitted to U.S. Environmental Protection Agency Research Laboratory, Duluth, MN by Cornell University, Ithaca, NY. #1982-1
- Hall, R.J., G.E. Likens, S.B. Fiance, and G.R. Hendrey. 1980. Experimental acidification of a stream in the Hubbard Brook Experimental Forest, New Hampshire. *Ecology* 61(4):976-989. #1980-10
- Halligan, B. J. and J. G. Eaton. 1978. Survival and reproduction of *Gammarus lacustris* and *G. pseudolimnaeus* under two experimental conditions. *Prog. Fish-Cult.* 40:59-62 #173
- Hamilton, M.A., R.C. Russo, and R.V. Thurston. 1977. Trimmed Spearman-Karber method for estimating median lethal concentrations in toxicity bioassays. *Environmental Science and Technology* 11(7):714-719. #1977-2
- Hammermeister, D. E., J. Serrano, P. Schmieder, and D. W. Kuehl. 2000. Characterization of dansylated glutathione, glutathione disulfide, cysteine and cystine by narrow bore liquid chromatography/electrospray ionization mass spectrometry. *Rap. Comm. Mass Spec.* 14:503-8 #732
- Hanratty, M.P. 1997. Sensitivity analysis of the soil and water assessment tool (SWAT) for simulation of climate change effects. Grazing Lands Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, El Reno, OK. #1997-18
- Hanratty, M. P. and F. S. Stay. 1994. Field evaluation of the Littoral Ecosystem Risk Assessment Model's prediction of the effects of chlorpyrifos. *J. Appl. Ecol.* 31:439-53 #534
- Hansch, C., J.P. Bjorkroth, and A. Leo. 1987. Hydrophobicity and central nervous system agents: On the principle of minimal hydrophobicity in drug design. *Journal of Pharmaceutical Sciences* 76(9):663-687. #1987-13
- Hansch, C., D. Kim, A.J. Leo, E. Novellino, C. Silipo, and A. Vittoria. 1989. Toward a quantitative comparative toxicology of organic compounds. *CRC Critical Reviews in Toxicology* 19(3):185-225. #1989-17
- Hansen, D. J., W. J. Berry, J. D. Mahony, W. S. Boothman, D. M. Di Toro, D. L. Robson, G. T. Ankley, D. Ma, Q. Yan, and C. E. Pesch. 1996. Predicting the toxicity of metal-contaminated field sediments using interstitial concentration of metals and acid-volatile sulfide normalizations. *Environ. Toxicol. Chem.* 15:2080-2094 #612
- Hansen, D.J., W.J. Berry, and C.E. Stephan. 1989. Internal report on the relative acute sensitivities of benthic and water-column species. EPA 600/X-89-132. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-48
- Hargis, J.R. 1984. Seasonal primary production and plankton dynamics in the St. Louis River and harbor. In: Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior. A.R. Carlson and N.A. Thomas, eds. Pp. 73-92. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1984-15
- Harris, H. J., T. C. Erdman, G. T. Ankley, and K. B. Lodge. 1993. Measures of reproductive success and polychlorinated biphenyl residues in eggs and chicks of Forster's terns on Green Bay, Lake Michigan, Wisconsin--1988. *Arch. Environ. Contam. Toxicol.* 25:304-14 #499
- Hassan, S. M., A. W. Garrison, H. E. Allen, D. M. Di Toro, and G. T. Ankley. 1996. Estimation of partition coefficients for five trace metals in sandy sediments and application to sediment quality criteria. *Environ. Toxicol. Chem.* 15:2198-208 #613
- Hazardous Waste Research Branch. 1988. Report on methods for leachate toxicity characterization. Internal report. Hazardous Waste Research Branch, Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-54
- Hedtke, S. F. 1984. Structure and function of copper-stressed aquatic microcosms. *Aquat. Toxicol.* 5:227-44 #276
- Hedtke, S. F. and F. A. Puglisi. 1980. Effects of waste oil on the survival and reproduction of the American flagfish, *Jordanella floridae*. *Can. J. Fish. Aquat. Sci.* 37:757-64 #203
- Hedtke, S. F. and F. A. Puglisi. 1982. Short-term toxicity of five oils to four freshwater species. *Arch.*

Environ. Contam. Toxicol. 11:425-30 #241

- Hedtke, S. F., C. W. West, K. N. Allen, T. J. Norberg-King, and D. I. Mount. 1986. Toxicity of pentachlorophenol to aquatic organisms under naturally varying and controlled environmental conditions. *Environ. Toxicol. Chem.* 5:531-42 #319
- Hedtke, S.F. and J.W. Arthur. 1985. Evaluation of a site-specific water quality criterion for pentachlorophenol using outdoor experimental streams. In: *Aquatic toxicology and hazard assessment: Seventh symposium*. R.D. Cardwell, R. Purdy, and R.C. Bahner, eds. Pp. 551-564. ASTM STP 854. American Society for Testing and Materials, Philadelphia, PA. #1985-21
- Heidtke, T.M., M.T. Auer, and R.P. Canale. 1986. Microcomputers and water quality models: Access for decision makers. *Journal WPCF* 58(10):960-966. #1986-26
- Heinis, L. J. and M. L. Knuth. 1992. The mixing, distribution and persistence of esfenvalerate within littoral enclosures. *Environ. Toxicol. Chem.* 11:11-25 #473
- Heinis, L. J., M. L. Knuth, K. Liber, B. R. Sheedy, R. L. Tunell, and G. T. Ankley. 1999. Persistence and distribution of 4-nonylphenol following repeated application to littoral enclosures. *Environ. Toxicol. Chem.* 18:363-75 #701
- Heinis, L.J. and J.A. Rogalla. 1985. Documentation of the ERLD-UMD Acid Rain Data Base III: Methodology and quality assurance summary for the laboratory analysis of conductivity, pH, alkalinity, color, turbidity and acidity of surface and ground waters of northern Minnesota, Wisconsin, Michigan and southwestern Ontario. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1985-6
- Heinrich, J., W. Lick, and J. Paul. 1981. Temperatures and currents in a stratified lake: A two-dimensional analysis. *J. Great Lakes Res.* 7(3):264-275. #1981-14
- Helgen, J. C., N. J. Larson, and R. L. Anderson. 1988. Responses of zooplankton and *Chaoborus* to temephos in a natural pond and in the laboratory. *Arch. Environ. Contam. Toxicol.* 17:459-71 #363
- Helmy, M. M., A. E. Lemke, P. G. Jacob, and B. L. Oostdam. 1978. Effects of some trace elements on the blood of Kuwait mullets, *Liza macrolepis* (Smith). *J. Exp. Mar. Biol. Ecol.* 34:151-61 #174
- Henneman, H.E. and H.G. Stefan. 1997. Measurements and models of snow and ice albedo on a lake: reports from the 1996 to 1997 Ryan Lake winter field studies. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1997-17
- Henry, T.R. and S.P. Bradbury. 1999. Fish tissue residue-based toxicity reference values for chlordane, DDT, dieldrin, endrin, hexachlorobenzene, mercury and PCBs for piscivorous wildlife. Unpublished abstract. American Chemical Society Pesticides and Wildlife Symposium, August 22-26, 1999, New Orleans, LA. #1999-18
- Henry, T.R., P. Cook, P. Cirone, M. DeVito, B. Duncan, R. Pepin, S. Schwenk, and S. Wharton. 2003. Framework for application of the toxicity equivalence methodology for polychlorinated dioxins, furans, and biphenyls in ecological risk assessment. *Organohalogen Compounds.* 65:300-303 #800
- Henry, T. R., D. J. Nesbit, W. Heideman, and R. E. Peterson. 2001. Relative potencies of polychlorinated dibenzo-p-dioxin, dibenzofuran, and biphenyl congeners to induce cytochrome P4501A mRNA in a zebrafish liver cell line. *Environ. Toxicol. Chem.* 20:1053-58 #759
- Herdendorf, C. E., ed. Lake Erie nutrient control program : an assessment of its effectiveness in controlling lake eutrophication. EPA 600/3-80/062. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802543. Project officer: N.A. Thomas
- Herman, L. J. 1992. Inexpensive environmental control chamber for holding fish. *Prog. Fish-Cult.* 54:132 #474
- Herman, L. J. 1989. Inexpensive method for repair of YSI model 403 thermistor probes. *Prog. Fish Cult.* 51:170-171 #387
- Herman, L. J. 1995. Water-conditioning tank to control supersaturation and temperature. *Prog. Fish Cult.* 57:164-65 #563
- Hermanutz, R. O. 1978. Endrin and malathion toxicity to flagfish (*Jordanella floridae*). *Arch. Environ. Contam. Toxicol.* 7:159-68 #175
- Hermanutz, R. O. 1992. Malformation of the fathead minnow (*Pimephales promelas*) in an ecosystem with elevated selenium concentrations. *Bull. Environ. Contam. Toxicol.* 49:290-294 #475
- Hermanutz, R. O., K. N. Allen, T. H. Roush, and S. F. Hedtke. 1992. Effects of elevated selenium

- concentrations on bluegills (*Lepomis macrochirus*) in outdoor experimental streams. *Environ. Toxicol. Chem.* 11:217-24 #476
- Hermanutz, R. O., J. G. Eaton, and L. H. Mueller. 1985. Toxicity of endrin and malathion mixtures to flagfish (*Jordanella floridae*). *Arch. Environ. Contam. Toxicol.* 14:307-14 #296
- Hermanutz, R. O., S. F. Hettke, J. W. Arthur, R. W. Andrew, and K. N. Allen. 1987. Ammonia effects on microinvertebrates and fish in outdoor experimental streams. *Environ. Pollut.* 47:249-83 #343
- Hermanutz, R. O., L. H. Mueller, and K. D. Kempfert. 1973. Captan toxicity to fathead minnows (*Pimephales promelas*), bluegills (*Lepomis macrochirus*), and brook trout (*Salvelinus fontinalis*). *J. Fish. Res. Board Can.* 30:1811-17 #87
- Hermanutz, R. and K. Allen. 1993. Effects and fate of atrazine in MERS wetland streams during spring - summer of 1992. Unpublished report. U.S. Environmental Protection Agency Research Laboratory, Duluth, MN. #1993-3
- Hermanutz, R.O., K.N. Allen, and S.F. Hettke. 1990. Toxicity and fate of total residual chlorine in outdoor experimental streams. In: *Water chlorination chemistry, environmental impact and health effects*, vol. 6. R.L. Jolley, L.W. Condie, D.J. Johnson, S. Katz, R.A. Minear, J.S. Mattice, and V.A. Jacobs, eds. Pp. 463-477. Lewis Publishers, Chelsea, MI. #1990-10
- Hermens, J. L., S. P. Bradbury, and S. J. Broderius. 1990. Influence of cytochrome P450 mixed-function oxidase induction on the acute toxicity to rainbow trout (*Salmo gairdneri*) of primary aromatic amines. *Ecotoxicol. Environ. Saf.* 20:156-66 #420
- Hern, S. C.; Hilgert, J. W.; Lambou, V. W.; Morris, F. A.; Morris, M. K.; Williams, L. R.; Taylor, W. D., and Hiatt, F. A. Distribution of phytoplankton in South Carolina lakes. EPA 600/3-77/102. Environmental Monitoring and Support Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Las Vegas, NV.
- Herzberg, A.M. 1988. Toxicity and accumulation of permethrin in the tilapia *Oreochromis aureus*. The Isr. J. Aquacult.-Bamidgeh 40(1):35-39. #1988-30
- Heuschele, A.S. 1982. Vertical distribution of profundal benthos in Lake Superior sediments. *J. Great Lakes Res.* 8(4):603-613. #1982-8
- Highland, T. and C. Curtis, compilers. 1983. Freshwater findings, 1979-1982: Research publications of the Environmental Research Laboratory, Duluth, MN. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1983-5
- Highland, T. and Curtis, C., compilers. Freshwater findings: 1979-1982. Research publications of the Environmental Research Laboratory, Duluth, Minnesota. EPA 600/x-84-003. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Hill, B. H., A. T. Herlihy, P. R. Kaufmann, S. J. DeCelles, and M. A. Vander Borgh. 2003. Assessment of streams of the eastern United States using a periphyton index of biotic integrity. *Ecological Indicators.* 2:325-38 #789
- Hill, B.H., A.T. Herlihy, and P.R. Kaufmann. 2002. Benthic microbial respiration in Appalachian Mountain, Piedmont, and Coastal Plains streams of the eastern U.S.A. *Freshwater Biol.*, 47:185-194. #2002-5
- Hill, B.H., R.J. Stevenson, Y. Pan, A.T. Herlihy, P.R. Kaufmann, and C. Burch Johnson. 2001. Comparison of correlations between environmental characteristics and stream diatom assemblages characterized at genus and species levels. *J. N. Am. Benthol. Soc.*, 20(2):299-310. #2001-14
- Hoadley, A. W. 1968. On the significance of *Pseudomonas aeruginosa* in surface waters. *J. New Engl. Water Works Assoc.* 99-111 #18
- Hockett, R. J. and D. R. Mount. 1996. Use of metal chelating agents to differentiate among sources of acute aquatic toxicity. *Environ. Toxicol. Chem.* 15:1687-93 #614
- Hoffman, A. D., S. L. Bertelsen, and M. L. Gargas. 1992. An *in vitro* gas equilibration method for determination of chemical partition coefficients in fish. *Comp. Biochem. Physiol.* 101A:47-51 #477
- Hoffman, A. D., J. J. Jenson, G. J. Lien, and J. M. McKim. 1999. Individual tissue weight to total body weight relationships and total, polar, and nonpolar lipids in tissues of hatchery lake trout. *Trans. Am. Fish. Soc.* 128:178-81 #718
- Hokanson, K. E. F. 1977. Temperature requirements of some percids and adaptations to the seasonal temperature cycle. *J. Fish. Res. Board Can.* 34:1524-50 #149

- Hokanson, K. E. F., C. F. Kleiner, and T. W. Thorslund. 1977. Effects of constant temperatures and diel temperature fluctuations on specific growth and mortality rates and yield of juvenile rainbow trout, *Salmo gairdneri*. *J. Fish. Res. Board Can.* 34:639-48 #150
- Hokanson, K. E. F. and W. M. Koenst. 1986. Revised estimates of growth requirements and lethal temperature limits of juvenile walleyes. *Prog. Fish-Cult.* 48:90-94 #320
- Hokanson, K. E. F. and G. J. Lien. 1986. Effects of diet on growth and survival of larval walleyes. *Prog. Fish-Cult.* 48:250-258 #321
- Hokanson, K. E. F., J. H. McCormick, and B. R. Jones. 1973. Temperature requirements for embryos and larvae of the northern pike, *Esox lucius* (Linnaeus). *Trans. Am. Fish. Soc.* 102:89-100 #88
- Hokanson, K. E. F., J. H. McCormick, B. R. Jones, and J. H. Tucker. 1973. Thermal requirements for maturation, spawning, and embryo survival of the brook trout, *Salvelinus fontinalis*. *J. Fish. Res. Board Can.* 30:975-84 #89
- Hokanson, K. E. F. and L. L. Smith, Jr. 1971. Some factors influencing toxicity of linear alkylate sulfonate (LAS) to the bluegill. *Trans. Am. Fish. Soc.* 100:1-12 #54
- Hokanson, K. 1969. Biological effects of heated waters. Presented at the Technical Seminar on Thermal Pollution, Jan. 6-7, 1969, Ada, OK; Jan. 9-10, 1969, Athens, GA; and Feb. 10-11, 1969, Charlottesville, VA. #1969-2
- Hokanson, K.E.F. 1969. Aquatic life temperature requirements. Presented at Sixty-ninth Meeting, FWPCA, Orsanco Engineering Committee, May 13-14, 1969, Cincinnati, OH. #1969-1
- Hokanson, K.E.F. 198? A national compendium of freshwater fish and water temperature data. Volume II: Temperature requirement data for thirty fishes. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #198?-7
- Hokanson, K.E.F. and K.E. Biesinger. 198? Temperatures supporting stream fish populations in field and laboratory: Implications for regulatory criteria and climate change. (Alternate title: Temperature requirements and annual temperature regimes supporting stream fish populations: Implications for regulatory criteria and climate change. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #198?-4
- Hokanson, K.E.F., K.E. Biesinger, B.E. Goodno, and J.G. Eaton. 199? Evaluation of field and laboratory derived fish thermal requirements for global climate warming impact assessments. (Alternate title: Temperature requirements of stream fishes with applications to global climate warming impact assessments). Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #199?-3
- Hokanson, K.E.F. and C.F. Kleiner. 1974. Effects of constant and rising temperatures on survival and developmental rates of embryonic and larval yellow perch, *Perca flavescens* (Mitchill). In: *Early life history of fish*. J.H.S. Blaxter, ed. Pp. 437-448. Springer-Verlag, New York, NY. #1974-14
- Hokanson, K.E.F. and G.J. Lien. 198? Effects of organic contaminants in ova upon growth and survival of larval walleye from the lower Fox River and Sturgeon Bay areas of Green Bay, Wisconsin. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #198?-3
- Hokanson, K.E.F., J.H. McCormick, and B.R. Jones. 19?? Effects of constant temperature on northern pike eggs and larvae. Unpublished paper. National Water Quality Laboratory, Federal Water Quality Administration, U.S. Department of the Interior, Duluth, MN. #19??-6
- Hokanson, K. E. F. A national compendium of freshwater fish and water temperature data. Volume II: temperature requirement data for thirty fishes. EPA 600/3-79/056 Part II. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Hoke, R. A., G. T. Ankley, A. M. Cotter, T. A. Goldenstein, P. A. Kosian, G. L. Phipps, and F. M. VanderMeiden. 1994. Evaluation of equilibrium partitioning theory for predicting acute toxicity of field-collected sediments contaminated with DDT, DDE and DDD to the amphipod *Hyalella azteca*. *Environ. Toxicol. Chem.* 13:157-66 #535
- Hoke, R. A., G. T. Ankley, P. A. Kosian, A. M. Cotter, F. M. Vandermeiden, M. Balcer, G. L. Phipps, C. W. West, and J. S. Cox. 1997. Equilibrium partitioning as the basis for an integrated laboratory and field assessment of the impacts of DDT, DDE and DDD in sediments. *Ecotoxicology*. 6:101-25 #641
- Hoke, R. A., G. T. Ankley, and J. R. Peters. 1995. Use of a freshwater sediment quality database in an evaluation of sediment quality criteria based on equilibrium partitioning and screening-level

- concentrations. *Environ. Toxicol. Chem.* 14:451-59 #564
- Hoke, R. A., W. R. Gala, J. B. Drake, J. P. Giesy, and S. Flegler. 1992. Bicarbonate as a potential confounding factor in cladoceran toxicity assessments of pore water from contaminated sediments. *Can. J. Fish. Aquat. Sci.* 49:1633-40 #478
- Hoke, R. A., J. P. Giesy, G. T. Ankley, J. L. Newsted, and J. R. Adams. 1990. Toxicity of sediments from western Lake Erie and the Maumee River at Toledo, Ohio, 1987: Implications for current dredged material disposal practices. *J. Great Lakes Res.* 16:457-70 #421
- Hoke, R. A., J. P. Giesy, and R. G. Kreis, Jr. 1992. Sediment pore water toxicity identification in the Lower Fox River and Green Bay, Wisconsin, using the Microtox assay. *Ecotoxicol. Environ. Saf.* 23:343-54 #479
- Hoke, R. A., J. P. Giesy, M. Zabik, and M. Unger. 1993. Toxicity of sediments and sediment pore waters from the Grand Calumet River-Indiana Harbor, Indiana area of concern. *Ecotoxicol. Environ. Saf.* 26:86-112 #500
- Hoke, R. A., P. A. Kosian, G. T. Ankley, A. M. Cotter, F. M. VanderMeiden, G. L. Phipps, and E. J. Durhan. 1995. Check studies with *Hyalella azteca* and *Chironomus tentans* in support of the development of a sediment quality criterion for dieldrin. *Environ. Toxicol. Chem.* 14:435-43 #565
- Holcombe, G. W., D. A. Benoit, D. E. Hammermeister, E. N. Leonard, and R. D. Johnson. 1995. Acute and long-term effects of nine chemicals on the Japanese medaka (*Oryzias latipes*). *Arch. Environ. Contam. Toxicol.* 28:287-97 #566
- Holcombe, G. W., D. A. Benoit, and E. N. Leonard. 1979. Long-term effects of zinc exposures on brook trout (*Salvelinus fontinalis*). *Trans. Am. Fish. Soc.* 108:76-97 #187
- Holcombe, G. W., D. A. Benoit, E. N. Leonard, and J. M. McKim. 1976. Long-term effects of lead exposure on three generations of brook trout (*Salvelinus fontinalis*). *J. Fish. Res. Board Can.* 33:1731-41 #132
- Holcombe, G. W., J. T. Fiandt, and G. L. Phipps. 1980. Effects of pH increases and sodium chloride additions on the acute toxicity of 2,4-dichlorophenol to the fathead minnow. *Water Res.* 14:1073-77 #204
- Holcombe, G. W., M. S. Pasha, K. M. Jensen, J. E. Tietge, and G. T. Ankley. 2000. Effects of photoperiod manipulation on brook trout reproductive development, fecundity, and circulating sex steroid concentrations. *North American Journal of Aquaculture.* 62:1-11 #728
- Holcombe, G. W., G. L. Phipps, and J. T. Fiandt. 1982. Effects of phenol, 2,4-dimethylphenol, 2,4-dichlorophenol, and pentachlorophenol on embryo, larval, and early-juvenile fathead minnows (*Pimephales promelas*). *Arch. Environ. Contam. Toxicol.* 11:73-78 #242
- Holcombe, G. W., G. L. Phipps, and J. T. Fiandt. 1983. Toxicity of selected priority pollutants to various aquatic organisms. *Ecotoxicol. Environ. Saf.* 7:400-409 #261
- Holcombe, G. W., G. L. Phipps, M. L. Knuth, and T. Felhaber. 1984. The acute toxicity of selected substituted phenols, benzenes and benzoic acid ester to fathead minnows *Pimephales promelas*. *Environ. Pollut. Ser. A.* 35:367-81 #277
- Holcombe, G. W., G. L. Phipps, and J. W. Marier. 1984. Methods for conducting snail (*Aplexa hypnorum*) embryo through adult exposures: Effects of cadmium and reduced pH levels. *Arch. Environ. Contam. Toxicol.* 13:627-34 #278
- Holcombe, G. W., G. L. Phipps, A. H. Sulaiman, and A. D. Hoffman. 1987. Simultaneous multiple species testing: Acute toxicity of 13 chemicals to 12 diverse freshwater amphibian, fish, and invertebrate families. *Arch. Environ. Contam. Toxicol.* 16:697-710 #344
- Holcombe, G. W., G. L. Phipps, and D. K. Tanner. 1982. The acute toxicity of kelthane, dursban, disulfoton, pydrin, and permethrin to fathead minnows *Pimephales promelas* and rainbow trout *Salmo gairdneri*. *Environ. Pollut. Ser. A.* 29:167-78 #243
- Holcombe, G.W. and R.W. Andrew. 1978. The acute toxicity of zinc to rainbow and brook trout: Comparisons in hard and soft water. EPA 600/3-78-094. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1978-11
- Holcombe, G.W., G.L. Phipps, and G.D. Veith. 1989. Use of aquatic lethality tests to estimate safe toxicant concentrations for initial ecological risk assessments. In: *Aquatic toxicology and environmental fate, 11th vol.* G.W. Suter, II and M.A. Lewis, eds. Pp. 442-458. ASTM STP 1007. American Society for Testing and Materials, Philadelphia, PA. #1989-32
- Holcombe, G. W. and Andrew, R. W. The acute toxicity of zinc to rainbow and brook trout : comparisons

- in hard and soft water. EPA 600/3-78/094. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Holland, R. E. Seasonal fluctuations of major diatom species at five stations across Lake Michigan, May 1970 - October 1972. EPA 600/3-80/066. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R805133-01-1. Project officer: N.A. Thomas
- Hondzo, M. and H.G. Stefan. 1993. Lake water temperature simulation model. *Journal of Hydraulic Engineering* 119(11):1251-1273. #1993-2
- Hondzo, M. and H.G. Stefan. 1993. Regional water temperature characteristics of lakes subjected to climate change. *Climatic Change* 24:187-211. #1993-8
- Hondzo, M. and H.G. Stefan. 1991. Three case studies of lake temperature and stratification response to warmer climate. *Water Resources Research* 27(8):1837-1846. #1991-9
- Hondzo, M. and H.G. Stefan. 1992. Water temperature characteristics of lakes subjected to climate change. Project Report No. 329, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis, MN. Prepared for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1992-4
- Horning, W. B. II and T. W. Neiheisel. 1979. Chronic effect of copper on the bluntnose minnow, *Pimephales notatus* (Rafinesque). *Arch. Environ. Contam. Toxicol.* 8:545-22 #188
- Horning, W. B. II and R. E. Pearson. 1973. Growth temperature requirements and lower lethal temperatures for juvenile smallmouth bass (*Micropterus dolomieu*). *J. Fish. Res. Board Can.* 30:1226-30 #90
- Hornung, M. W., G. T. Ankley, and P. K. Schmieder. 2003. Induction of an estrogen-responsive reporter gene in rainbow trout hepatoma cells (RTH 149) at 11 or 18°C. *Environ. Toxicol. Chem.* 22:866-71 #788
- Hornung, M. W., P. M. Cook, K. M. Flynn, D. B. Lothenbach, R. D. Johnson, and J. W. Nichols. 2004. Use of multi-photon laser-scanning microscopy to describe the distribution of xenobiotic chemicals in fish early life stages. *Aquat. Toxicol.* 67:1-11 #817
- Hornung, M. W., K. M. Jensen, J. J. Korte, M. D. Kahl, E. J. Durhan, J. S. Denny, T. R. Henry, and G. T. Ankley. 2004. Mechanistic basis for estrogenic effects in fathead minnow (*Pimephales promelas*) following exposure to the androgen 17α-methyltestosterone: conversion of 17α-methyltestosterone to 17α-methylestradiol. *Aquat. Toxicol.* 66:15-23 #816
- Host, G.E., R.R. Regal, and C.E. Stephan. 1990. Analyses of acute and chronic data for aquatic life. Internal report. Office of Environmental Processes and Effects Research. Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C. #1990-22
- Hudec, T., J. Thean, D. W. Kuehl, and R. C. Dougherty. 1981. Tris(dichloropropyl)phosphate, a mutagenic flame retardant: Frequent occurrence in human seminal plasma. *Science*. 211:951-52 #221
- Hughes, R.A., G.D. Veith, and G.F. Lee. 1970. Gas chromatographic analysis of toxaphene in natural waters, fish and lake sediments. *Water Research*, 4:547-558. #1970-14
- Hughes, R.M., T.R. Whittier, S.A. Thiele, J.E. Pollard, D.V. Peck, S.G. Paulsen, D. McMullen, J. Lazorchak, D.P. Larsen, W.L. Kinney, P.R. Kaufmann, S. Hedtke, S.S. Dixit, G.B. Collins, and J.R. Baker. 1992. Lake and stream indicators for the United States Environmental Protection Agency's environmental monitoring and assessment program. In: *Ecological Indicators, Volume 1*. McKenzie, D.H., Hyatt, D.E. and McDonald, V.J., eds. pp. 305-335. Elsevier Applied Science, New York, NY. #1992-33
- Hunt, E. P. and Glass, G. E., eds. The Environmental Research Laboratory -- Duluth bibliography of research products in the fields of freshwater ecology and toxicology 1967-1990. EPA 600/3-90-071. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Hunter, R.S., F.D. Culver, and A. Fitzgerald. 1987. SMILES user manual: A simplified molecular input line entry system; includes extended SMILES for defining fragments. Review draft. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1987-5
- Hunter, R.S., F.D. Culver, J.R. Hill, III, and A. Fitzgerald. 1988. QSAR System user manual: A structure-activity based chemical modeling and information system. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-52

Hunter, R.S., F.D. Culver, and G.D. Veith. 1988. Version 1.0 of the QSAR System: Computer system for estimation of physicochemical properties and ecotoxicological effects from chemical structure. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-65

Hunter, R.S., G.J. Niemi, A. Pilli, and G.D. Veith. 1990. Aquatic information and retrieval (AQUIRE) database system. In: *Envirotech Vienna 1990: Computer applications for environmental impact analysis*. W. Pillman, ed. Pp. 42-48. International Society for Environmental Protection, Vienna, Austria. #1990-12

Hutchinson, T.C. and H. Czyska. 1972. Cadmium and zinc toxicity and synergism to floating aquatic plants. Institute of Environmental Sciences and Engineering, Publ. No. EI-3. In: *Water pollution research in Canada 1972*. Pp. 59-65. #1972-10

I

Imlay, M. J. 1969. A dual behavioral interpretation of a single environmental stimulus with freshwater mussels. *Am. Malacol. Union Inc. Ann. Rep.* 21-22 #28

Imlay, M. J. 1973. Effects of potassium on survival and distribution of freshwater mussels. *Malacologia*. 12:97-113 #91

Imlay, M. J. 1972. Greater adaptability of fresh-water mussels to natural than artificial displacement. *Bull. Am. Malacol. Union Inc.* February 1972:43-44 #68

Imlay, M. J. 1972. Reproduction of *Amblema costata* (Rafinesque) in Moose River, Minnesota. *Nautilus*. 85:146 #69

Imlay, M. J. 1969. Some research needs and methods for protecting naiads from extinction. *Am. Malacol. Union Inc. Ann. Rep.* 49-51 #29

Imlay, M. J. and M. L. Paige. 1972. Laboratory growth of freshwater sponges, unionid mussels, and sphaeriid clams. *Prog. Fish-Cult.* 34:210-216 #70

Ingersoll, C. G., G. T. Ankley, D. A. Benoit, E. L. Brunson, G. A. Burton, F. J. Dwyer, R. A. Hoke, P. F. Landrum, T. J. Norberg-King, and P. V. Winger. 1995. Toxicity and bioaccumulation of sediment-associated contaminants using freshwater invertebrates: A review of methods and applications. *Environ. Toxicol. Chem.* 14:1885-94 #567

Ingersoll, C. G., E. L. Brunson, N. Wang, F. J. Dwyer, G. T. Ankley, D. R. Mount, J. Huckins, J. Petty, and P. F. Landrum. 2003. Uptake and depuration of nonionic organic contaminants from sediment by the oligochaete, *Lumbriculus variegatus*. *Environ. Toxicol. Chem.* 22:872-85 #786

Ingersoll, C.G., G.T. Ankley, R. Baudo, G.A. Burton, W. Lick, S.N. Luoma, D.D. MacDonald, T.B. Reynoldson, K.R. Solomon, R.C. Swartz, and W.J. Warren-Hicks. 1997. Session 6: Critical issues in methodological uncertainty: Workgroup summary report on uncertainty evaluation of measurement endpoints used in sediment ecological risk assessment. In: *Ecological risk assessment of contaminated sediments*. C.G. Ingersoll, T. Dillon, G.R. Biddinger, eds. Pp. 297-352. SETAC Press, Pensacola, FL. #1997-2

Ingersoll, C. G.; Ankley, G. T.; Burton, G. A.; Dwyer, F. J.; Hoke, R. A.; Norberg-King, T. J., and Winger, P. V. Methods for measuring the toxicity and bioaccumulation of sediment-associated contaminants with freshwater invertebrates. EPA 600/R-94-024. Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.

Institute of Paper Chemistry. 1973. Effects of pulp and paper mill effluents on fresh water fish: An annotated bibliography. Prepared by The Institute of Paper Chemistry, Appleton, WI for U.S. Environmental Protection Agency, Duluth, MN. #1973-16

Isensee, A. R. and Yockim, R. S. Freshwater micro-ecosystem development and testing of substitute chemicals. EPA 600/3-80/008. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract no. EPA-IA6-05-5811. Project officer: J.G. Eaton

Ivanov, J., O. Mekenyan, S.P. Bradbury, and G. Schuurmann. 1998. A kinetic analysis of the conformational flexibility of steroid hormones. *Quant. Struct.-Act. Relat.* 17:437-449. #1998-9

J

Jaeger, M. J. Predicting effects of an electric generating station on wetland passerine birds : Wisconsin power plant impact study. EPA 600/3-80/020. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803971. Project officer: G.E. Glass

Jackson, H.W. and W.A. Brungs, Jr. 1967. Biomonitoring of industrial effluents. Proc. 21st Ind. Waste

- Conf. Purdue Univ., May 3-5, 1966. Part 1, 50(2):117-124. #1967-1
- Jackson, L.J., A.S. Trebitz, and K.L. Cottingham. 2000. An introduction to the practice of ecological modeling. *Bioscience*, 50(8):694-706. #2000-4
- Jacobson, J.L., S.W. Jacobson, and G.G. Fein. 1985. Intrauterine exposure to environmental toxins: The significance of subtle behavioral effects. In: *Beyond the individual environmental stressors*. The Haworth Press, Inc. Pp. 125-137. #1985-10
- Jacobson, S.W., G.G. Fein, J.L. Jacobson, P.M. Schwartz, and J.K. Dowler. 1985. The effect of intrauterine PCB exposure on visual recognition memory. *Child Development* 56:853-860. #1985-12
- Jaffe, R., E.A. Stemmler, B.D. Eitzer, and R.A. Hites. 1985. Anthropogenic, polyhalogenated, organic compounds in sedentary fish from Lake Huron and Lake Superior tributaries and embayments. *J. Great Lakes Res.* 11(2):156-162. #1985-14
- Jahoda, J. R. Instrumentation to monitor location of fish continuously in experimental channels. EPA 600/3-77/035. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 68-01-0752. Project officer: K.E.F. Hokanson
- Jarvinen, A. W., M. J. Hoffman, and T. W. Thorslund. 1977. Long-term effects of DDT food and water exposure on fathead minnows (*Pimephales promelas*). *J. Fish. Res. Board Can.* 34:2089-103 #151
- Jarvinen, A. W., B. R. Nordling, and M. E. Henry. 1983. Chronic toxicity of Dursban (chlorpyrifos) to the fathead minnow (*Pimephales promelas*) and the resultant acetylcholinesterase inhibition. *Ecotoxicol. Environ. Saf.* 7:423-34 #262
- Jarvinen, A. W. and D. K. Tanner. 1982. Toxicity of selected controlled release and corresponding unformulated technical grade pesticides to the fathead minnow *Pimephales promelas*. *Environ. Pollut. Ser. A* 27:179-95 #244
- Jarvinen, A. W., D. K. Tanner, and E. R. Kline. 1988. Toxicity of chlorpyrifos, endrin, or fenvalerate to fathead minnows following episodic or continuous exposure. *Ecotoxicol. Environ. Saf.* 15:78-95 #364
- Jarvinen, A. W., D. K. Tanner, E. R. Kline, and M. L. Knuth. 1988. Acute and chronic toxicity of triphenyltin hydroxide to fathead minnows (*Pimephales promelas*) following brief or continuous exposure. *Environ. Pollut.* 52:289-301 #365
- Jarvinen, A. W. and R. M. Tyo. 1978. Toxicity to fathead minnows of endrin in food and water. *Arch. Environ. Contam. Toxicol.* 7:409-21 #176
- Jarvinen, A.W., D.R. Mount, and G.T. Ankley. 1998. Development of tissue residue threshold values. In: EPA 823/R-98/002. Office of Water, U.S. Environmental Protection Agency, Washington, D.C. #1998-2
- Jarvinen, A.W., R.L. Spehar, and C.E. Stephan. 1990. Chesapeake Bay Pesticide Index and Registry project: Report to Region III. 600/x-90-117. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1990-3
- Jarvinen, A.W. and R.M. Tyo. 1978. Partial chronic food and water endrin toxicity to fathead minnows. *Arch. Environ. Contam. Toxicol.*, 7:409-421. #1978-14
- Jarvinen, A. W.; Hoffman, M. J., and Thorslund, T. W. Toxicity of DDT food and water exposure to fathead minnows. EPA 600/3-76/114. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Jaworski, N.A. 1981. Sources of nutrients and the scale of eutrophication problems in estuaries. In: *Estuaries and nutrients*. B.J. Neilsen and L.E. Cronin, eds. Pp. 83-110. Humana Press, Clifton, NJ. #1981-18
- Jaworski, N.A. and D.I. Mount. 1985. Use of statistical information to improve compatibility between the various components of the water quality based approach. In: *Aquatic toxicology and hazard assessment: Seventh symposium*. R.D. Cardwell, R. Purdy, R.C. Bahner, eds. Pp. 565-573. ASTM STP 854. American Society for Testing and Materials, Philadelphia, PA. #1985-20
- Jaworski, N.A. and O. Villa, Jr. 1981. A suggested approach for developing estuarine water quality criteria for management of eutrophication. In: *Estuaries and nutrients*. B.J. Neilsen and L.E. Cronin, eds. Pp. 499-516. Humana Press, Clifton, NJ. #1981-19
- Jensen, A.L. 1982. Impact of a once-through cooling system on the yellow perch stock in the western basin of Lake Erie. *Ecological Modelling* 15:127-144. #1982-4

- Jensen, A.L. and T.A. Hamilton. 1982. Application of a conventional fishery model for assessment of entrainment and impingement impact. *Env. Biol. Fish.* 7(2):181-185. #1982-3
- Jensen, D.A. and J.C. Brazner. 1988. Effects of chlorpyrifos on macroinvertebrates in littoral enclosures. In: *Proceedings of the Fourteenth Annual Aquatic Toxicity Workshop*, November 2-4, 1987, Toronto, Ontario. A.J. Niimi and K.R. Solomon, eds. Pp. 101-107. Canadian Technical Report of Fisheries and Aquatic Sciences No. 1607. Department of Fisheries and Oceans, Burlington, Ontario. #1988-37
- Jensen, K. M., J. J. Korte, M. D. Kahl, M. S. Pasha, and G. T. Ankley. 2001. Aspects of basic reproductive biology and endocrinology in the fathead minnow (*Pimephales promelas*). *Comp. Biochem. Physiol. Part C.* 128:127-41 #753
- Jepsen, R., S. Borglin, W. Lick, and D.L. Swackhamer. 1995. Parameters affecting the adsorption of hexachlorobenzene to natural sediments. *Environ. Toxicol. Chem.*, 14(9):1487-1497. #1995-19
- Jepsen, R. and W. Lick. 1996. Parameters affecting the adsorption of PCBs to suspended sediments from the Detroit River. *J. Great Lakes Res.*, 22(2):341-353. #1996-28
- Johnson, L. B., C. Richards, G. E. Host, and J. W. Arthur. 1997. Landscape influences on water chemistry in midwestern stream ecosystems. *Freshwater Biol.* 37:193-208 #635
- Johnson, R. D., J. E. Tietge, K. M. Jensen, J. D. Fernandez, A. L. Linnum, D. B. Lothenbach, G. W. Holcombe, P. M. Cook, S. A. Christ, D. L. Lattier, and D. A. Gordon. 1998. Toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin to early life stage brook trout (*Salvelinus fontinalis*) following parental dietary exposure. *Environ. Toxicol. Chem.* 17:2408-21 #692
- Johnson, R.D., M.J. Mac, G.N. Stokes, J.E. Tietge, and F. Zhang. 1990. Absence of liver tumors in bullheads (*Ictalurus spp.*) collected from the lower Fox River and Green Bay Wisconsin. EPA 600/X-90-140. Internal report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1990-25
- Johnson, R.D., J.E. Tietge, and G.N. Stokes. 1993. Validation of the medaka assay for chemical carcinogens. In: *Compendium of the FY1988 and FY1989 Research Reviews for the Research Methods Branch*. Pp. 45-60. U.S. Army Biomedical Research and Development Laboratory, Fort Detrick, Frederick, MD. #1993-13
- Johnson, R.D., J.E. Tietge, G.N. Stokes, and D.B. Lothenbach. 1993. The medaka carcinogenesis model. In: *Compendium of the FY1988 and FY1989 Research Reviews for the Research Methods Branch*. Pp. 147-172. U.S. Army Biomedical Research and Development Laboratory, Fort Detrick, Frederick, MD. #1993-14
- Johnson, W. W. and Julin, A. M. Acute toxicity of toxaphene to fathead minnows, channel catfish, and bluegills. EPA 600/3-80/005. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract no. EPA IAG 141 (D). Project officer: L.H. Mueller
- Johnston, C.A. 199? Ecological research applications of Geographic Information Systems. EPA 600/D-89-179. Presented at GIS/LIS '89, American Society for Photogrammetry and Remote Sensing, November 26-30, 1989, Orlando, FL. #199?-1
- Johnston, C.A. 1989. Human impacts to Minnesota wetlands. *Journal of the Minnesota Academy of Science* 55(1):120-124. #1989-57
- Johnston, C.A. 1992. Land-use activities and western Lake Superior water quality. In: *Making a Great Lake Superior*. J. Vander Wal and P.D. Watts, eds. Pp. 146-162. Occasional Paper #9. Lakehead University Centre for Northern Studies, Thunder Bay, Ontario. #1992-23
- Johnston, C.A., N.E. Detenbeck, and G.J. Niemi. 1990. The cumulative effect of wetlands on stream water quality and quantity. A landscape approach. *Biogeochemistry* 10:105-141. #1990-4
- Jones, B.F., C.E. Warren, C.E. Bond, and P. Doudoroff. 1956. Avoidance reactions of salmonid fishes to pulp mill effluents. *Sewage and Industrial Wastes*, 28:1403-1413. #1956-2
- Jones, B.R., K.E.F. Hokanson, and J.H. McCormick. 1977. Winter temperature requirements for maturation and spawning of yellow perch *Perca flavescens* (Mitchell). In: *Proceedings of the World Conference - Towards a Plan of Actions for Mankind, vol. 3: Biological balance and thermal modifications*. M. Marois, ed. Pp. 189-192. Pergamon Press, New York, NY. #1977-11
- Jones, B.R. and R.F. Syrett. 1974. Effects of constant winter temperatures on maturation and spawning of largemouth bass (*Micropterus salmoides*). Unpublished report. National Environmental Research Center, U.S. Environmental Protection Agency, Corvallis, OR. #1974-6
- Jones, P. D., G. T. Ankley, D. A. Best, R. A. Crawford, N. DeGalan, J. P. Giesy, T. J. Kubiak, J. P. Ludwig,

- J. L. Newsted, D. E. Tillitt, and D. A. Verbrugge. 1993. Biomagnification of bioassay derived 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents. *Chemosphere*. 26:1203-12 #501
- Jones, P. D., J. P. Giesy, J. L. Newsted, D. A. Verbrugge, D. L. Beaver, G. T. Ankley, D. E. Tillitt, K. B. Lodge, and G. J. Niemi. 1993. 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents in tissues of birds at Green Bay, Wisconsin, USA. *Arch. Environ. Contam. Toxicol.* 24:345-54 #502
- Jude, D., M. Flexner, R. Moll, P. Mansfield, D.S. White, and S. Hendricks. 1989. Water quality changes along the Detroit River and effects on entrained zooplankton and larval fish. Cooperative agreement project report. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #1989-44
- Jude, D.J. and S.F. DeBoe. 1996. Possible impact of gobies and other introduced species on habitat restoration efforts. *Can. J. Fish. Aquat. Sci.* 53(Suppl. 1):136-141. #1996-1
- Jude, D.J., J. Janssen, and G. Crawford. 1995. Ecology, distribution, and impact of the newly introduced round tubenose gobies on the biota of the St. Clair & Detroit Rivers. In: *The Lake Huron ecosystem: Ecology, fisheries and management*. Munawar, M., T. Edsall, and J. Leach, eds. Pp. 447-460. Academic Publishing, Amsterdam, The Netherlands. #1995-6
- K
- Kahl, M. D., K. M. Jensen, J. J. Korte, and G. T. Ankley. 2001. Effects of handling on endocrinology and reproductive performance of the fathead minnow (*Pimephales promelas*). *J. Fish Biol.* 59:515-23 #765
- Kahl, M. D., E. A. Makynen, P. A. Kosian, and G. T. Ankley. 1997. Toxicity of 4-nonylphenol in a life-cycle test with the midge *Chironomus tentans*. *Ecotoxicol. Environ. Saf.* 38:155-60 #663
- Kahl, M. D., C. L. Russom, D. L. DeFoe, and D. E. Hammermeister. 1999. Saturation units for use in aquatic bioassays. *Chemosphere*. 39:539-51 #712
- Kamlet, M. J., R. M. Doherty, G. D. Veith, R. W. Taft, and M. H. Abraham. 1986. Solubility properties in polymers and biological media. 7. An analysis of toxicant properties that influence inhibition of bioluminescence in *Photobacterium phosphoreum* (the Microtox test). *Environ. Sci. Technol.* 20:690-695 #322
- Karabunarliev, S., O. G. Mekyan, W. Karcher, C. L. Russom, and S. P. Bradbury. 1996. Quantum-chemical descriptors for estimating the acute toxicity of electrophiles to the fathead minnow (*Pimephales promelas*): An analysis based on molecular mechanisms. *Quant. Struct.-Act. Relat.* 15:302-10 #615
- Karabunarliev, S., O. G. Mekyan, W. Karcher, C. L. Russom, and S. P. Bradbury. 1996. Quantum-chemical descriptors for estimating the acute toxicity of substituted benzenes to the guppy (*Poecilia reticulata*) and fathead minnow (*Pimephales promelas*). *Quant. Struct.-Act. Relat.* 15:311-20 #616
- Katopodes, N.D. and M. Piasecke. 1996. Site and size optimization of contaminant sources in surface water systems. *Journal of Environmental Engineering*, 122(10):917-923. #1996-23
- Kavlock, R. J. and G. T. Ankley. 1996. A perspective on the risk assessment process for endocrine-disruptive effects on wildlife and human health. *Risk Anal.* 16:731-39 #617
- Keen, R.E. and D.I. Mount. 198? Culturing aquatic crustaceans in dilute bottled mineral water (Hannibal's medium): A new twist for Perrier. Unpublished manuscript. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #198?-9
- Kelly, J. R. 1998. Quantification and potential role of ocean nutrient loading to Boston Harbor, Massachusetts, USA. *Mar Ecol Prog Ser.* 173:53-65 #693
- Kelly, J. R. and P. H. Doering. 1999. Seasonal deepening of the pycnocline in a shallow shelf ecosystem and its influence on near-bottom dissolved oxygen. *Mar Ecol Prog Ser.* 178:151-68 #707
- Kelly, J.R. 2001. Nitrogen effects on coastal marine ecosystems. In: *Nitrogen in the Environment: Sources, Problems, and Management*. Follett, R.F. and Hatfield, J.L., eds. pp. 207-251. Elsevier Science, New York, NY. #2001-11
- Kelly, J.R. 1997. Nutrients and human-induced change in the Gulf of Maine -- "one, if by land, and two, if by sea". In: *Proceedings of the Gulf of Maine ecosystem dynamics scientific symposium and workshop*. Wallace, G.T. and Brasch, E.F., eds. pp. 169-181. RARGOM report, 97-1. Hanover, NH. #1997-12
- Kemble, N.E., F.J. Dwyer, C.G. Ingersoll, T.D. Dawson, and T.J. Norberg-King. 1999. Tolerance of freshwater test organisms to formulated sediments for use as control materials in whole-sediment toxicity tests. *Environ. Toxicol. Chem.*, 18(2):222-230. #1999-21

- Kemp, J.R. and K.B. Wallace. 1990. Molecular determinants of the species-selective inhibition of brain acetylcholinesterase. *Toxicology and Applied Pharmacology* 104:246-258. #1990-9
- Kenaga, D. E.; Creal, W. S., and Basch, R. E. Limnology of Michigan's nearshore waters of Lake Michigan. EPA 905/3-83-003. Great Lakes National Program Office, U.S. Environmental Protection Agency Region 5, Chicago, IL/Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Project no. R005146-01. Project officer: N.A. Thomas, Grosse Ile, MI
- Kennel, S.J., G. Mason, and S. Safe. 1986. Monoclonal antibodies to chlorinated dibenzo-*p*-dioxins. *Chemosphere* 15(9-12):2007-2010. #1986-15
- Keough, J. R., C. A. Hagley, E. Ruzycki, and M. E. Sierszen. 1998. $\delta^{13}\text{C}$ composition of primary producers and role of detritus in a freshwater coastal ecosystem. *Limnol. Oceanogr.* 43:734-40 #685
- Keough, J. R., M. E. Sierszen, and C. A. Hagley. 1996. Analysis of a Lake Superior coastal food web with stable isotope techniques. *Limnol. Oceanogr.* 41:136-46 #618
- Keough, J.R. 1994. Understanding Great Lakes food webs using stable isotope signatures. *Great Lakes Wetlands* 5(4):1-2, 9-10. #1994-9
- Keough, J.R. and J. Griffin. 1994. Technical workshop on EMAP indicators for Great Lakes Coastal Wetlands. Unpublished summary report. #1994-20
- Kerfoot, W.C., S. Harting, R. Rossmann, and J.A. Robbins. 1999. Anthropogenic copper inventories and mercury profiles from Lake Superior: evidence for mining impacts. *J. Great Lakes Res.*, 24(4):663-682. #1999-14
- Kerfoot, W.C., S.L. Harting, R. Rossmann, and J.A. Robbins. 2002. Elemental mercury in copper, silver and gold ores: an unexpected contribution to Lake Superior sediments with global implications. *Geochemistry: Exploration, Environment, Analysis*, v. 2, pp. 185-202. #2002-10
- Khattat, F. H. and Farley, S. Acute toxicity of certain pesticides to *Acartia tonsa* Dana. EPA 600/3-76-033. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Narragansett, RI, Contract # 68-01-0151. Project officer: J.H. Gentile
- Kimball, G. 1978. The effects of lesser known metals and one organic to fathead minnow (*Pimephales promelas*) and (*Daphnia magna*). Unpublished report. #1978-3
- Kimble, P. F. and Temple, K. L. Microbial effect on the quality of leach water from eastern Montana coal mine spoils. EPA 600/3-80/046. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (Environmental effects of western coal surface mining. Part VII): Grant # R803950. Project officer: D.I. Mount
- King, R. S. and J. C. Brazner. 1999. Coastal wetland insect communities along a trophic gradient in Green Bay, Lake Michigan. *Wetlands*. 19:426-37 #713
- Kingston, J.C., B.F. Cumming, A.J. Uutala, J.P. Smol, K.E. Camburn, D.F. Charles, S.S. Dixit, and R.G. Kreis, Jr. 1992. Biological quality control and quality assurance: a case study in paleolimnological biomonitoring. In: *Ecological Indicators, Volume 2*. McKenzie, D.H., Hyatt, D.E. and McDonald, V.J., eds. pp. 1542-1544. Elsevier Applied Sciences, New York, NY. #1992-32
- Kleerekoper, H. Effects of copper on the locomotor orientation of fish. EPA R3-73-045. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Project # R800995. Project officer: J.M. McKim
- Kleiner, C. F., R. L. Anderson, and D. K. Tanner. 1984. Toxicity of fenitrothion to fathead minnows (*Pimephales promelas*) and alternative exposure duration studies with fenitrothion and endosulfan. *Arch. Environ. Contam. Toxicol.* 13:573-78 #279
- Kleinow, K., J. Baker, J. Nichols, F. Gobas, T. Parkerton, D. Muir, G. Monteverdi, and P. Mastrodone. 1999. Exposure, uptake, and disposition of chemicals in reproductive and developmental stages of selected oviparous vertebrates. In: *Reproductive and Developmental Effects of Contaminants in oviparous vertebrates*, Di Guillio, R.T. and Tillitt, D.E., eds., pp. 9-111. SETAC Press, Pensacola, FL. #1999-15
- Klemm, D. J.; Morrison, G. E.; Norberg-King, T. J.; Peltier, W. H., and Heber, M. A. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to marine and estuarine organisms (Second edition). EPA 600/4-91-003. Environmental Monitoring Systems Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH.
- Kletti, L.L. and H.G. Stefan. 1995. Empirical relationships between runoff and climate parameters: an analysis for Minnesota. Environmental Research Laboratory, U.S. Environmental Protection

- Agency, Duluth, MN. #1995-25
- Kline, E. R., A. W. Jarvinen, and M. L. Knuth. 1989. Acute toxicity of triphenyltin hydroxide to three cladoceran species. *Environ. Pollut.* 56:11-17 #388
- Kline, E. R., V. R. Mattson, Q. H. Pickering, D. L. Spehar, and C. E. Stephan. 1987. Effects of pollution on freshwater organisms. *J. Water Pollut. Control Fed.* 59:539-72 #345
- Klump, J. V., J. L. Kaster, and M. E. Sierszen. 1991. *Mysis relicta* assimilation of hexachlorobiphenyl from sediments. *Can J. Fish. Aquat. Sci.* 48:284-89 #451
- Knuth, M. L. 1989. Determination of the insect growth regulator methoprene in natural waters by capillary gas-liquid chromatography. *Chemosphere.* 18:2275-81 #389
- Knuth, M. L. and L. J. Heinis. 1992. Dissipation and persistence of chlorpyrifos within littoral enclosures. *J. Ag. Food Chem.* 40:1257-63 #480
- Knuth, M. L. and L. J. Heinis. 1995. Distribution and persistence of diflubenzuron within littoral enclosure mesocosms. *J. Ag. Food Chem.* 43:1087-97 #568
- Knuth, M. L., L. J. Heinis, and L. E. Anderson. 2000. Persistence and distribution of azinphos-methyl following application to littoral enclosure mesocosms. *Ecotoxicol. Environ. Saf.* 47:167-77 #745
- Knuth, M.L., ed. 1992. Effects, persistence and distribution of azinphos-methyl in littoral enclosures. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN and Lake Superior Research Institute, University of Wisconsin-Superior, Superior, WI. #1992-3
- Koenst, W. M. and Smith, L. L. Factors influencing growth and survival of white sucker, *Catostomus commersoni*. EPA 600/3-82/051. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB82-221474): Grant # R804501. Project officer: K.E.F. Hokanson
- Kolanczyk, R., P. Schmieder, S. Bradbury, and T. Spizzo. 1999. Biotransformation of 4-methoxyphenol in rainbow trout (*Oncorhynchus mykiss*) hepatic microsomes. *Aquat. Toxicol.* 45:47-61 #705
- Kolanczyk, R. C., P. N. Fitzsimmons, J. M. McKim, Sr., R. J. Erickson, and P. K. Schmieder. 2003. Effects of anesthesia (tricaine methanesulfonate, MS222) on liver biotransformation in rainbow trout (*Oncorhynchus mykiss*). *Aquat. Toxicol.* 64:177-84 #792
- Kolanczyk, R. C. and P. K. Schmieder. 2002. Rate and capacity of hepatic microsomal ring-hydroxylation of phenol to hydroquinone and catechol in rainbow trout (*Oncorhynchus mykiss*). *Toxicology.* 176:77-90 #773
- Kolanczyk, R.C., H.R. Gutmann, and I.R. Rutks. 1992. Effect of bovine serum albumin on the extent of ortho rearrangement of N-(Sulfoxy)-2-fluorenylacetamide and of enzymatically activated N-Hydroxy-2-fluorenylacetamide and on the binding of reactive esters to nucleic acids. *Chem. Res. Toxicol.* 5:274-279. #1992-30
- Kolanczyk, R.C., I.R. Rutks, and H.R. Gutmann. 1991. The catalytic effect of bovine serum albumin on the ortho rearrangement of the potential ultimate carcinogen, N-(Sulfoxy)-2-(acetylamino)fluorene, generated enzymatically from N-Hydroxy-2-(acetylamino)fluorene and evidence for substrate specificity of the enzymatic sulfonation of arylhydroxamic acids. *Chem. Res. Toxicol.* 4:187-194. #1991-32
- Koonce, J. F., T. B. Bagenal, R. F. Carline, K. E. F. Hokanson, and M. Nagiec. 1977. Factors influencing year-class strength of percids: A summary and model of temperature effects. *J. Fish. Res. Board Can.* 34:1900-1909 #152
- Kopperman, H.L., D.W. Kuehl, and G.E. Glass. 1976. Chlorinated compounds found in waste-treatment effluents and their capacity to bioaccumulate. In: *Proceedings of the Conference on the Environmental Impact of Water Chlorination*, October 22-24, 1975, Oak Ridge, TN. R.L. Jolley, ed. Pp. 327-345. #1976-5
- Korte, J. J., M. D. Kahl, K. M. Jensen, M. S. Pasha, L. G. Parks, G. A. LeBlanc, and G. T. Ankley. 2000. Fathead minnow vitellogenin: complementary DNA sequence and messenger RNA and protein expression after 17 β -estradiol treatment. *Environ. Toxicol. Chem.* 19:972-81 #730
- Kosian, P. A., R. A. Hoke, G. T. Ankley, and F. M. VanderMeiden. 1995. Determination of dieldrin binding to dissolved organic material in sediment pore water using a reverse-phase separation technique. *Environ. Toxicol. Chem.* 14:445-50 #569
- Kosian, P.A. and G.T. Ankley. 1991. A summary of proposed methods for assessing contaminated sediments and deriving sediment quality criteria. Background document for the OECD Workshop on Contaminated Sediments, May 13-15, 1991, Copenhagen, Denmark. #1991-2

- Kosian, P. A., E. A. Makynen, G. T. Ankley, and S. J. Degitz. 2003. Uptake and metabolism of all-*trans* retinoic acid by three native North American ranids. *Toxicological Sciences*. 74:147-56 #794
- Kosian, P. A., E. A. Makynen, P. D. Monson, D. R. Mount, A. Spacie, O. G. Mekyan, and G. T. Ankley. 1998. Application of toxicity-based fractionation techniques and structure-activity relationship models for the identification of phototoxic polycyclic aromatic hydrocarbons in sediment pore water. *Environ. Toxicol. Chem.* 17:1021-33 #677
- Kosian, P. A., C. W. West, M. S. Pasha, J. S. Cox, D. R. Mount, R. J. Huggett, and G. T. Ankley. 1999. Use of nonpolar resin for reduction of fluoranthene bioavailability in sediment. *Environ. Toxicol. Chem.* 18:201-6 #697
- Kosian, P.; Lemke, A.; Studders, K., and Veith, G. The precision of the ASTM bioconcentration test. EPA 600/3-81/022. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB81-168932).
- Kratz, T.K., R.B. Cook, C.J. Bowser, and P.L. Brezonik. 1987. Winter and spring pH depressions in northern Wisconsin lakes caused by increases in *pCO₂*. *Can. J. Fish. Aquat. Sci.* 44(5):1082-1088. #1987-40
- Kratz, T.K., T.M. Frost, and J.J. Magnuson. 1987. Inferences from spatial and temporal variability in ecosystems: Long-term zooplankton data from lakes. *American Naturalist* 129(6):830-846. #1987-41
- Krausse, G.L., Schelske C.L., and C.O. Davis. 1983. Comparison of three wet-alkaline methods of digestion of biogenic silica in water. *Freshwater Biology* 13:73-81. #1983-1
- Kreis, R.G., Jr. 1995. Data and summary report for zebra mussel analyses from the Smithland Lock and Dam, Ohio River, and the Black Rock Lock, Nigara River. Report to Waterway Experiment Station, U.S. Army Engineers, Vicksburg, MI. #1995-15
- Kreis, R.G., Jr. 2000. Integrated ecosystem response models for Lake Erie. In: *Great Lakes Modeling Summit: focus on Lake Erie*, Appendix B, pp. 6-11. #2000-2
- Kreis, R.G., Jr. 1999. Trenton Channel/Detroit River sediment assessment and remediation. In: *Deciding when to intervene : data interpretation tools for making sediment management decisions beyond source control*. Appendix 10, pp. 57-59. #1999-16
- Kreis, R.G., Jr., J.E. Rathbun, A.E. MacCubbin, R.A. Hites, V.E. Smith, M.J. Mac, J.C. Filkins, S.A. Rudolph, M.D. Mullin, K.A. Vargo, and K.P. McGunagle. 1989. An investigation of neoplasia in Detroit River fish and its relationship to sediment contamination. Internal report. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #1989-46
- Kreis, R.G., Jr., D. Woodring, and A.G. Kizlauskas. 198? Conceptual framework for ranking hazardous sediments in the Laurentian Great Lakes. Unpublished manuscript. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #198?-2
- Kreis, R.G., Jr., ed. 1988. Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. #1988-4
- Kuehl, D. W. 1977. Identification of trace contaminants in environmental samples by selected ion summation analysis of gas chromatographic-mass spectral data. *Anal. Chem.* 49:521-22 #153
- Kuehl, D. W. 1981. Unusual polyhalogenated chemical residues identified in fish tissue from the environment. *Chemosphere*. 10:231-42 #222
- Kuehl, D. W., G. T. Ankley, L. P. Burkhard, and D. A. Jensen. 1990. Bioassay directed characterization of the acute aquatic toxicity of a creosote leachate. *Hazard. Waste & Hazard. Mater.* 7:283-91 #422
- Kuehl, D. W., B. C. Butterworth, W. M. DeVita, and C. P. Sauer. 1987. Environmental contamination by polychlorinated dibenz-p-dioxins and dibenzofurans associated with pulp and paper mill discharge. *Biomed. Environ. Mass Spectrom.* 14:443-47 #346
- Kuehl, D. W., B. C. Butterworth, and K. L. Johnson. 1986. Supplemental quality assurance criteria for high-resolution gas chromatography/high resolution mass spectrometric determination of 2,3,7,8-tetrachlorodibenzo-p-dioxin in biological tissue. *Anal. Chem.* 58:1598-99 #323
- Kuehl, D. W., B. C. Butterworth, J. J. Libal, and P. J. Marquis. 1991. An isotope dilution high resolution gas chromatographic-high resolution mass spectrometric method for the determination of coplanar polychlorinated biphenyls: Application to fish and marine mammals. *Chemosphere*. 22:849-58 #452

- Kuehl, D. W., B. C. Butterworth, and P. J. Marquis. 1994. A national study of chemical residues in fish III: Study results. *Chemosphere*. 29:523-35 #536
- Kuehl, D. W., B. C. Butterworth, A. McBride, S. Kroner, and D. Bahnick. 1989. Contamination of fish by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin: A survey of fish from major watersheds in the United States. *Chemosphere*. 18:1997-2014 #390
- Kuehl, D. W. and J. Christensen. 1999. Determination of kow values for a series of aryl glucuronides. *Bull. Environ. Contam. Toxicol.* 63:109-16 #715
- Kuehl, D. W., P. M. Cook, and A. R. Batterman. 1985. Studies on the bioavailability of 2,3,7,8-TCDD from municipal incinerator flyash to freshwater fish. *Chemosphere*. 14:871-72 #297
- Kuehl, D. W., P. M. Cook, and A. R. Batterman. 1986. Uptake and depuration studies of PCDDs and PCDFs in freshwater fish. *Chemosphere*. 15:2023-26 #324
- Kuehl, D. W., P. M. Cook, A. R. Batterman, and B. C. Butterworth. 1987. Isomer-dependent bioavailability of polychlorinated dibenzo-*p*-dioxins and dibenzofurans from municipal incinerator fly ash to carp. *Chemosphere*. 16:657-66 #347
- Kuehl, D. W., P. M. Cook, A. R. Batterman, and D. B. Lothenbach. 1985. Bioavailability of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin from municipal incinerator fly ash to freshwater fish. *Chemosphere*. 14:427-37 #298
- Kuehl, D. W., P. M. Cook, A. R. Batterman, D. B. Lothenbach, and B. C. Butterworth. 1987. Bioavailability of polychlorinated dibenzo-*p*-dioxins and dibenzofurans from contaminated Wisconsin river sediment to carp. *Chemosphere*. 16:667-79 #348
- Kuehl, D. W. and R. C. Dougherty. 1980. Pentachlorophenol in the environment. Evidence for its origin from commercial pentachlorophenol by negative chemical ionization mass spectrometry. *Environ. Sci. Technol.* 14:447-49 #205
- Kuehl, D. W., E. J. Durhan, B. C. Butterworth, and D. Linn. 1984. Identification of polychlorinated planar chemicals in fishes from major watersheds near the Great Lakes. *Environ. Int.* 10:45-49 #280
- Kuehl, D. W., E. J. Durhan, B. C. Butterworth, and D. Linn. 1984. Tetrachloro-9H-carbazole, a previously unrecognized contaminant in sediments of the Buffalo River. *J. Great Lakes Res.* 10:210-214 #281
- Kuehl, D. W., L. Eisenschenk, S. Naumann, R. D. Johnson, R. R. Regal, P. Barnidge, and J. M. McKim. 1991. Comparison of nucleoside concentration in blood of fish with and without tumors. *Bull. Environ. Contam. Toxicol.* 46:713-19 #453
- Kuehl, D. W., G. E. Glass, and F. A. Puglisi. 1974. Automatic high temperature vent system for a gas chromatograph/mass spectrometer interface. *Anal. Chem.* 46:804-5 #107
- Kuehl, D. W. and R. Haebler. 1995. Organochlorine, organobromine, metal, and selenium residues in bottlenose dolphins (*Tursiops truncatus*) collected during an unusual mortality event in the Gulf of Mexico, 1990. *Arch. Environ. Contam. Toxicol.* 28:494-99 #570
- Kuehl, D. W., R. Haebler, and C. Potter. 1991. Chemical residues in dolphins from the U.S. Atlantic coast including Atlantic bottlenose obtained during the 1987/88 mass mortality. *Chemosphere*. 22:1071-84 #454
- Kuehl, D. W., R. Haebler, and C. Potter. 1994. Coplanar PCB and metal residues in dolphins from the U.S. Atlantic coast including Atlantic bottlenose obtained during the 1987/88 mass mortality. *Chemosphere*. 28:1245-53 #537
- Kuehl, D. W., K. L. Johnson, B. C. Butterworth, E. N. Leonard, and G. D. Veith. 1981. Quantification of octachlorostyrene and related compounds in Great Lakes fish by gas chromatography-mass spectrometry. *J. Great Lakes Res.* 7:330-335 #223
- Kuehl, D. W., H. L. Kopperman, G. D. Veith, and G. E. Glass. 1976. Isolation and identification of polychlorinated styrenes in Great Lakes fish. *Bull. Environ. Contam. Toxicol.* 16:127-32 #133
- Kuehl, D. W. and E. N. Leonard. 1977. Isolation of xenobiotic chemicals from tissue samples by gel permeation chromatography. *Anal. Chem.* 50:182-85 #154
- Kuehl, D. W., E. N. Leonard, B. C. Butterworth, and K. L. Johnson. 1983. Polychlorinated chemical residues in fish from major watersheds near the Great Lakes, 1979. *Environ. Int.* 9:293-99 #263
- Kuehl, D. W., E. N. Leonard, K. J. Welch, and G. D. Veith. 1980. Identification of hazardous organic chemicals in fish from the Ashtabula River, Ohio, and Wabash River, Indiana. *J. Assoc. Off. Anal. Chem.* 63:1238-44 #206
- Kuehl, D. W. and B. Rozynov. 2003. Chromatographic and mass spectral studies of perfluorooctanesulfonate and three perfluorooctanesulfonamides. *Rap. Comm. Mass Spec.*

17:2364-69 #805

- Kuehl, D. W., J. Serrano, and S. Naumann. 1994. Identification of potentially mutagenic contaminants in the aquatic environment by liquid chromatographic-thermospray mass spectrometric characterization of in vitro DNA adducts. *J. Chromatogr. A.* 684:113-19 #538
- Kuehl, D. W., M. J. Whitaker, and R. C. Dougherty. 1980. Micromethods for toxic residue screening by negative chemical ionization mass spectrometry. *Anal. Chem.* 52:935-40 #207
- Kuehl, D.W., G.T. Ankley, L.P. Burkhard, D.A. Jensen, and J.J. Jenson. 1989. Toxicity profiles for aquatic impacts as waste leachate characteristics: Toxicity characteristics of creosote and latex paint leachates. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-51
- Kuehl, D.W. and R.C. Dougherty. 1980. Screening of human and food chain samples for contamination with toxic substances using negative chemical ionization mass spectrometry. In: *Advances in mass spectrometry, vol. 8B*. A. Quayle, ed. Pp. 1451-1459. Heydon and Son, Ltd., London. #1980-15
- Kuehl, D.W., R.C. Dougherty, Y. Tondeur, D.L. Stalling, L.M. Smith, and C. Rappe. 1981. Negative chemical ionization studies of polychlorinated dibenzo-p-dioxins, dibenzofurans, and naphthalenes in environmental samples. In: *Environmental health chemistry - The chemistry of environmental agents as potential human hazards*. J. D. McKinney, ed. Pp. 245-261. Ann Arbor Science, Ann Arbor, MI. #1981-15
- Kuehl, D.W., G.D. Veith, and E.N. Leonard. 1978. Brominated compounds found in waste-treatment effluents and their capacity to bioaccumulate. In: *Water chlorination environmental impact and health effects, vol. 2*. R.L. Jolley, H. Gorchev, and D.H. Hamilton, Jr., eds. Pp. 175-192. Ann Arbor Science, Ann Arbor, MI. #1978-8
- L
- Lahvis, G. P., R. S. Wells, D. W. Kuehl, J. L. Stewart, H. L. Rhinehart, and C. S. Via. 1995. Decreased lymphocyte response in free-ranging bottlenose dolphins (*Tursiops truncatus*) are associated with increased concentrations of PCBs and DDT in peripheral blood. *Environ. Health Perspect.* 103:67-72 #571
- Landrum, P.F. and R. Poore. 1988. Toxicokinetics of selected xenobiotics in *Hexagenia limbata*. *J. Great Lakes Res.* 14(4):427-437. #1988-17
- Large Lakes Research Station. 1976. A plan for the study of hazardous substances in the Great Lakes - Specifically related to Saginaw Bay. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #1976-3
- Large Lakes Research Station. 1987. Presentations and publications (revised 11/30/87). Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #1987-4
- Large Lakes Research Station. 1988. Report on project planning for the Green Bay Physical-Chemical Mass Balance and Food Chain Models. Internal report. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI and Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-48
- Larson, G. L.; Warren, C. E.; Hutchins, F. E.; Lamperti, L. P.; Schlesinger, D. A., and Seim, W. K. Toxicity of residual chlorine compounds to aquatic organisms. EPA 600/3-78/023. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802286. Project officer: W.A. Brungs
- Larsen, D. P., F. DeNoyelles, Jr., F. Stay, and T. Shiroyama. 1986. Comparisons of single-species, microcosm and experimental pond responses to atrazine exposure. *Environ. Toxicol. Chem.* 5:179-90 #325
- Lauer, W. L.; Schuytema, G. S.; Sanville, W. D.; Stay, F. S., and Powers, C. F. The effects of decreased nutrient loading on the limnology of Diamond Lake, Oregon. EPA 600/8-79/017a. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR.
- Lauritsen, D.D., S.C. Mozley, and D.S. White. 1985. Distribution of oligochaetes in Lake Michigan and comments on their use as indices of pollution. *J. Great Lakes Res.* 11(1):67-76. #1985-15
- Lech, J. and Melancon, M. Uptake, metabolism and disposition of xenobiotic chemicals in fish: Wisconsin Power Plant Impact Study. EPA 600/3-80/082. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant no. R803971. Project officer: G.E. Glass

- Lee, D.Y., W. Lick, and S.W. Kang. 1981. The entrainment and deposition of fine-grained sediments in Lake Erie. *J. Great Lakes Res.* 7(3):224-233. #1981-5
- Lee, G.F. and G.D. Veith. 1971. Effects of thermal discharges on the chemical parameters of water quality and eutrophication. *Proceedings of the International Symposium for Identification and Measurements of Pollution in the Environment*, Ottawa, Canada, June 1971. #1971-3
- Lee, G. F. An evaluation of hazardous chemicals in Lake Ontario during IFYGL. EPA 600/3-80-060. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R-803187. Project officer: M.D. Mullin
- Leibowitz, S. G.; Preston, E. M.; Arnaut, L. Y.; Detenbeck, N. E.; Hagley, C. A.; Kentula, M. E.; Olson, R. K.; Sanville, W. D., and Sumner, R. R. Wetlands research plan FY92-96: an integrated risk-based approach. EPA 600/R-92/060. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR.
- Leino, R. L. and J. H. McCormick. 1984. Morphological and morphometrical changes in chloride cells of the gills of *Pimephales promelas* after chronic exposure to acid water. *Cell Tissue Res.* 236:121-28 #282
- Leino, R. L. and J. H. McCormick. 1997. Reproductive characteristics of the ruffe, *Gymnocephalus cernuus*, in the St. Louis River estuary on western Lake Superior: A histological examination of the ovaries over one annual cycle. *Can. J. Fish. Aquat. Sci.* 54:256-63 #649
- Leino, R. L. and J. H. McCormick. 1993. Responses of juvenile largemouth bass to different pH and aluminum levels at overwintering temperatures: Effects on gill morphology, electrolyte balance, scale calcium, liver glycogen, and depot fat. *Can. J. Zool.* 71:531-43 #503
- Leino, R. L., J. H. McCormick, and K. M. Jensen. 1987. Changes in gill histology of fathead minnows and yellow perch transferred to soft water or acidified soft water with particular reference to chloride cells. *Cell Tissue Res.* 250:389-99 #349
- Leino, R. L., J. H. McCormick, and K. M. Jensen. 1990. Multiple effects of acid and aluminum on brood stock and progeny of fathead minnow, with emphasis on histopathology. *Can. J. Zool.* 68:234-44 #423
- Leino, R.L. 1991. Histomorphological changes and ionoregulatory physiology in largemouth bass exposed to overwintering conditions and elevated aluminum in acid water. Final report, Contract no. CR-81-4582-01-3, Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1991-7
- Leino, R.L. 1991. Histopathological effects of acidification on largemouth bass, rock bass, and yellow perch from Little Rock Lake. Final report to the U.S. Environmental Protection Agency for EPA/CR-81-4582-01-2. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1991-6
- Leino, R.L., J.G. Anderson, and J.H. McCormick. 1983. Development of apical pits in chloride cells of the gills of *Pimephales promelas* after chronic exposure to acid water. In: *Proceedings of the 41st Annual Meeting of the Electron Microscopy Society of America*. G.W. Bailey, ed. Pp. 462-463. San Francisco Press, San Francisco, CA. #1983-12
- Leino, R.L. and J.H. McCormick. 199? Histopathological effects of experimental acidification on largemouth bass, rock bass, and yellow perch from Little Rock Lake, Wisconsin. Unpublished report. #199?-4
- Leino, R.L. and J.H. McCormick. 1993. Histopathological effects of experimental acidification on largemouth bass, rock bass, and yellow perch from Little Rock Lake, Wisconsin. In: *Proceedings of the Nineteenth Annual Aquatic Toxicity Workshop*, October 4-7, 1992, Edmonton, Alberta. E.G. Baddaloo, S. Ramamoorthy, and J.W. Moore, eds. Pp. 201-223. Canadian Technical Report of Fisheries and Aquatic Sciences 1942. Department of Fisheries and Oceans, Canada. #1993-15
- Leino, R.L., J.H. McCormick, and K.M. Jensen. 1988. Effects of acid and aluminum on swim bladder development and yolk absorption in the fathead minnow, *Pimephales promelas*. In: *Proceedings of the Fourteenth Annual Aquatic Toxicity Workshop*, November 2-4, 1987, Toronto, Ontario. A.J. Niimi and K.R. Solomon, eds. Pp. 37-41. Canadian Technical Report of Fisheries and Aquatic Sciences No. 1607. Department of Fisheries and Oceans, Burlington, Ontario. #1988-39
- Leino, R.L., J.H. McCormick, and K.M. Jensen. 1992. Long-term effects of an acute acid pulse on juvenile black crappie, *Pomoxis nigromaculatus*. In: *Proceedings of the Eighteenth Annual Aquatic Toxicity Workshop*, Sept. 30-Oct. 3, 1991, Ottawa, Ontario. Pp. 369-371. (Presented at the Sixteenth Annual Aquatic Toxicity Workshop, Nov. 6-8, 1989, Winnipeg, Manitoba.). #1992-

- Leino, R.L., P. Wilkinson, and J.G. Anderson. 1987. Histopathological changes in the gills of pearl dace, *Semotilus margarita*, and fathead minnows, *Pimephales promelas*, from experimentally acidified Canadian lakes. *Can. J. Fish. Aquat. Sci.* 44(Suppl. 1):126-134. #1987-42
- Lemke, A. E. 1977. Optimum temperature for growth of juvenile bluegills. *Prog. Fish-Cult.* 39:55-57 #155
- Lemke, A. E. 1969. A water hardener for experimental use. *J. Am. Water Works Assoc.* 61:415-16 #30
- Lemke, A. E. and W. F. Dawson. 1979. Temperature-monitoring and safety-control device. *Prog. Fish-Cult.* 41:165-66 #189
- Lemke, A. E. and V. R. Mattson. 1969. An emergence trap for aquatic insects. *Mich. Entomol.* 2:19-21 #31
- Lemke, A.E. 1983. Agrochemical hazards in aquatic systems and evaluation of such hazards with emphasis on developing countries. In: *Proceedings of the International Conference on Environmental Hazards of Agrochemicals in Developing Countries*, vol. 1, November 8-12, 1983, Alexandria, Egypt. Pp. 417-433. Alexandria University, Egypt. #1983-13
- Lemke, A.E. 1964. A new design for constant-flow test chambers. *Progressive Fish Culturist*, 26:136-138. #1964-2
- Lemke, A.E. 1979. Round-robin fish acutes test group. Unpublished report. #1979-1
- Lemke, A.E. 1973. Static bioassays with benzidine. Unpublished memo to Dr. Donald I. Mount. #1973-24
- Lemke, A.E. and D.I. Mount. 1963. Some effects of alkyl benzene sulfonate on the bluegill, *Lepomis macrochirus*. *Transactions of the American Fisheries Society* 92(4):372-378. #1963-1
- Lemke, A. E. Interlaboratory comparison acute testing set. EPA 600/3-81/005. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB81-160772).
- Lemke, A. E. Interlaboratory comparison of continuous flow, early life stage testing with fathead minnows. EPA 600/3-84-005. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB84-129493).
- Lemke, A. E. and Anderson, R. L. Insect interlaboratory toxicity test comparison study for the Chironomid (Paratanytarsus sp.) procedure. EPA 600/3-84-054. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB84-180025).
- Lemke, A. E.; Brungs, W. A., and Halligan, B. J. Manual for construction and operation of toxicity-testing proportional diluters. EPA 600/3-78/072. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Lemke, A. E.; Durhan, E., and Felhaber, T. Evaluation of a fathead minnow *Pimephales promelas* embryo-larval test guideline using acenaphthene and isophorone. EPA 600/3-83-062. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB83-243436).
- Leo, A.J. 1989. Increasing the accuracy of computer calculated log P(oct/water) values. In: QSAR: Quantitative structure-activity relationships in drug design. Alan R. Liss, Inc. Pp. 53-58. #1989-4
- Leonard, E. N. 1971. The determination of copper in fish tissues by atomic absorption spectrophotometry. *Atomic Absorp. Newslett.* 10:84-85 #55
- Leonard, E. N., G. T. Ankley, and R. A. Hoke. 1996. Evaluation of metals in marine and freshwater surficial sediments from the environmental monitoring and assessment program relative to proposed sediment quality criteria for metals. *Environ. Toxicol. Chem.* 15:2221-32 #619
- Leonard, E. N., A. M. Cotter, and G. T. Ankley. 1996. Modified diffusion method for analysis of acid volatile sulfides and simultaneously extracted metals in freshwater sediment. *Environ. Toxicol. Chem.* 15:1479-81 #620
- Leonard, E. N., V. R. Mattson, and G. T. Ankley. 1995. Horizon-specific oxidation of acid volatile sulfide in relation to the toxicity of cadmium spiked into a freshwater sediment. *Arch. Environ. Contam. Toxicol.* 28:78-84 #572
- Leonard, E. N., V. R. Mattson, D. A. Benoit, R. A. Hoke, and G. T. Ankley. 1993. Seasonal variation of acid volatile sulfide concentration in sediment cores from three northeastern Minnesota lakes. *Hydrobiologia.* 271:87-95 #504
- Leonard, E. N., D. R. Mount, and G. T. Ankley. 1999. Modification of metal partitioning by supplementing acid volatile sulfide in freshwater sediments. *Environ. Toxicol. Chem.* 18:858-64 #708

- Lewis, M.J. 1972. A core collection in water supply and pollution control. *Special Libraries Association Newsletter* No. 3:8-11. #1972-9
- Lewis, P. A.; Klemm, D. J.; Lazorchak, J. M.; Norberg-King, T. J.; Peltier, W. H., and Heber, M. A., eds. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms . EPA 600/4-91/002. Environmental Monitoring Systems Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH.
- Liber, K., D. J. Call, T. D. Dawson, F. W. Whiteman, and T. M. Dillon. 1996. Effects of *Chironomus tentans* larval growth retardation on adult emergence and ovipositing success: Implications for interpreting freshwater sediment bioassays. *Hydrobiologia*. 323:155-67 #621
- Liber, K., D. J. Call, T. P. Markee, K. L. Schmude, M. D. Balcer, F. W. Whiteman, and G. T. Ankley. 1996. Effects of acid-volatile sulfide on zinc bioavailability and toxicity to benthic macroinvertebrates: A spiked-sediment field experiment. *Environ. Toxicol. Chem.* 15:2113-25 #622
- Liber, K., J. A. Gangl, T. D. Corry, L. J. Heinis, and F. S. Stay. 1999. Lethality and bioaccumulation of 4-nonylphenol in bluegill sunfish in littoral enclosures. *Environ. Toxicol. Chem.* 18:394-400 #704
- Liber, K., M. L. Knuth, and F. S. Stay. 1999. An integrated evaluation of the persistence and effects of 4-nonylphenol in an experimental littoral ecosystem. *Environ. Toxicol. Chem.* 18:357-62 #703
- Lick, W. 1982. Entrainment, deposition, and transport of fine-grained sediments in lakes. *Hydrobiologia* 91:31-40. #1982-6
- Lick, W. 1986. Modeling the transport of fine-grained sediments in aquatic systems. *The Science of the Total Environment* 55:219-228. #1986-19
- Lick, W. and S.W. Kang. 1987. Entrainment of sediments and dredged materials in shallow lake waters. *J. Great Lakes Res.* 13(4):619-627. #1987-9
- Lick, W. and J. Lick. 1988. Aggregation and disaggregation of fine-grained lake sediments. *J. Great Lakes Res.* 14(4):514-523. #1988-8
- Lick, W., J. Lick, and C.K. Ziegler. 1994. The resuspension and transport of fine-grained sediments in Lake Erie. *J. Great Lakes Res.*, 20(4):599-612. #1994-28
- Lick, W. and V. Rapaka. 1996. A quantitative analysis of the dynamics of the sorption of hydrophobic organic chemicals to suspended sediments. *Environ. Toxicol. Chem.*, 15(7):1038-1048. #1996-21
- Lick, W., Y.-J. Xu, and J. McNeil. 1995. Resuspension properties of sediments from the Fox, Saginaw, and Buffalo Rivers. *J. Great Lakes Res.*, 21(2):257-274. #1995-22
- Lick, W., K. Ziegler, and C.H. Tsai. 1988. Resuspension, deposition and transport of fine-grained sediments in rivers and near-shore areas (Appendix G). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix G. #1988-4
- Lick, W. Numerical models of lake currents. EPA 600/3-76/020. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R-802359. Project officer: W.L. Richardson
- Lien, G. J. and J. M. McKim. 1993. Predicting branchial and cutaneous uptake of 2,2',5,5'-tetrachlorobiphenyl in fathead minnows (*Pimephales promelas*) and Japanese medaka (*Oryzias latipes*): Rate limiting factors. *Aquat. Toxicol.* 27:15-32 #505
- Lien, G. J., J. M. McKim, A. D. Hoffman, and C. T. Jenson. 2001. A physiologically based toxicokinetic model for lake trout (*Salvelinus namaycush*). *Aquat. Toxicol.* 51:335-50 #749
- Lien, G. J., J. W. Nichols, J. M. McKim, and C. A. Gallinat. 1994. Modeling the accumulation of three waterborne chlorinated ethanes in fathead minnows (*Pimephales promelas*): A physiologically based approach. *Environ. Toxicol. Chem.* 13:1195-205 #539
- Lien, G. J.; Biesinger, K. E.; Anderson, L. E.; Leonard, E. N., and Gibbons, M. A. A toxicity evaluation of lower Fox River water and sediments. EPA 600/3-86-008. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Lima, A. R., C Curtis, D. E. Hammermeister, T. P. Markee, C. E. Northcott, and L. T. Brooke. 1984. Acute and chronic toxicities of arsenic(III) to fathead minnows, flagfish, daphnids, and an amphipod. *Arch. Environ. Contam. Toxicol.* 13:595-601 #283
- Limno-Tech, Inc. 1995. A preliminary ecosystem modeling study of zebra mussels (*Dreissena*

- polymorpha*) in Saginaw Bay, Lake Huron. Cooperative Agreement #CR-818560. Prepared for Great Lakes Program, State University of New York at Buffalo, Buffalo, NY by Environmental Research Laboratory-Duluth and Large Lakes and Rivers Research Branch, Grose Ile, MI, U.S. Environmental Protection Agency. #1995-2
- Lin, J.C., J.L. Schnoor, and G.E. Glass. 1987. Ion budgets in a seepage lake. In: *Sources and fates of aquatic pollutants*. Advances in Chemistry Series No. 216. R.A. Hites, and S.J. Eisenreich, eds. Pp. 210-227. American Chemical Society, Chicago, IL. #1987-37
- Lin, C. K. and Schelske, C. L. Effects of nutrient enrichment, light intensity, and temperature on growth of phytoplankton from Lake Huron. EPA 600/3-79/049. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800965. Notes: Project officer: J.K. Crawford
- Lind, A.E. and G.E. Glass. 199? Asbestos contamination of Lake Superior: ten years of litigation -- U.S.A. vs Reserve Mining Company. In: Contaminants and Sediments -- volume 1, pp. 219-270. #199?-7
- Lindau, C.W., R.D. DeLaune, S. Jiraporncharoen, and D. Manajuti. 1991. Nitrous oxide and dinitrogen emissions from *Panicum hemitomon* S. freshwater marsh soils following addition of N-15 labelled ammonium and nitrate. Journal of Freshwater Ecology 6(2):191-198. #1991-11
- Liss, W.J., B.L. McClurken-Lilley, and D.S. Lee. 1984. Structure and organization of persistant aquatic laboratory communities exposed to the insecticide dieldrin. EPA-600/S3-84-013. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-16
- Liss, W.J., B.L. McClurken-Lilley, and D.S. Lee. 1984. Structure and organization of persistant aquatic laboratory communities exposed to the insecticide dieldrin. EPA/S3-84-013. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-16
- Liss, W.J., B.L. McClurken-Lilley, and D.S. Lee. 1984. Structure and organization of persistent aquatic laboratory communities exposed to the insecticide dieldrin. EPA-600/S3-84-013. #1984-16
- Liss, W. J.; Woltering, D. M.; Finger, S. E.; Kulwicki, M. L., and McClurken, B. Organization and adaptation of aquatic laboratory ecosystems exposed to the pesticide dieldrin. EPA 600/3-82/050. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB82-219122): Grant # R804622. Project officer: J.G. Eaton
- Lodge, K. B. and P. M. Cook. 1989. Partitioning studies of dioxin between sediment & water: The measurement of K_{oc} for Lake Ontario sediment. *Chemosphere*. 19:439-44 #391
- Lodge, K.B. 1990. Measurement of K_p , K_{oc} and related quantities with particular reference to Lake Ontario and the Hyde Park case. In: Lake Ontario TCDD bioaccumulation study, final report. Chapter 5. Unpublished report. U.S. Environmental Protection Agency, New York State Department of Environmental Conservation, New York State Department of Health, and Occidental Chemical Corporation. #1990-18
- Lodge, K.B. 1989. Solubility studies using a generator column for 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. *Chemosphere* 18(1-6):933-940. #1989-19
- Longstaff, B.C. 1977. The dynamics of collembolan populations: a matrix model of single species population growth. *Can. Jrl. Zool.*, 55:314-324. #1977-21
- Lorenz, R.C. and C.E. Herdendorf. 1982. Growth dynamics of *Cladophora glomerata* in western Lake Erie in relation to some environmental factors. *J. Great Lakes Res.* 8(1):42-53. #1982-16
- Loucks, O. L., G. E. Glass, J. A. Sorensen, B. W. Liukkonen, J. D. Allert, and G. R. Rapp, Jr. 1986. Role of precipitation chemistry versus other watershed properties in Wisconsin lake acidification. *Water Air Soil Pollut.* 31:67-77 #326
- Loucks, O.L. 1982. The concern for acidic deposition in the Great Lakes region. In: *Acid precipitation: Effects on ecological systems*. D'Itri, F.M., ed. Ann Arbor Science, Ann Arbor, MI. Pp. 21-41. #1982-13
- Loucks, O.L. 1984. Use of forest site index for evaluating terrestrial resources at risk from acidic deposition. In: *Direct and indirect effects of acidic deposition on vegetation*. Linthurst, R.A., ed. Butterworth Publishers, Boston, MA. Pp. 97-109. #1984-8
- Loucks, O.L. and G.E. Glass. 1984. U.S./Canada aquatic impacts assessment: Integration of experimental studies, monitoring and modeling of acidic deposition effects. In: Modeling of total acid precipitation impacts. J.L. Schnoor, ed. Butterworth Publishers, Stoneham, MA. #1984-12
- Loucks, O.L., G.E. Glass, J.A. Sorensen, and G. Rapp, Jr. 1989. Acidification of long-renewal-time lakes in Wisconsin and Michigan. Internal report. Environmental Research Laboratory, U.S.

- Environmental Protection Agency, Duluth, MN. #1989-50
- Lozano, S. J., S. L. O'Halloran, K. W. Sargent, and J. C. Brazner. 1992. Effects of esfenvalerate on aquatic organisms in littoral enclosures. *Environ. Toxicol. Chem.* 11:35-47 #481
- Lozano, S. J., J. V. Scharold, and T. F. Nalepa. 2001. Recent declines in benthic macroinvertebrate densities in Lake Ontario. *Can. J. Fish. Aquat. Sci.* 58:518-29 #757
- Lozano, S.J. 1988. Use of mesocosms in evaluating the health of aquatic ecosystems. In: *Protection of River Basins, Lakes, and Estuaries : fifteen years of cooperation toward solving environmental problems in the USSR and USA*. Ryans, R.C., ed. pp. 107-115, American Fisheries Society, Bethesda, MD. #1988-61
- Lozano, S.J., J.C. Brazner, M.L. Knuth, L.J. Heinis, K.W. Sargent, D.K. Tanner, L.E. Anderson, S.L. O'Halloran, S.L. Bertelsen, D.A. Jensen, E.R. Kline, M.D. Balcer, F.S. Stay, and R.E. Siefert. 1989. Effects, persistence and distribution of esfenvalerate in littoral enclosures. Internal report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1989-56
- Lukasewycz, M. T. and E. J. Durhan. 1992. Strategies for the identification of non-polar toxicants in aqueous environmental samples using toxicity-based fractionation and gas chromatography-mass spectrometry. *J. Chromatogr. Biomed. Appl.* 580:215-28 #482
- Lukasewycz, M.T., C.M. Bleringer, R.J. Liukkonen, M.E. Fitzsimmons, H.F. Corcoran, S. Lin, and R.M. Carlson. 1989. Analysis of inorganic and organic chloramines: Derivatization with 2-mercaptobenzothiazole. *Environ. Sci. Technol.* 23:196-199. #1989-15
- M
- Maccubbin, A.E. 1988. Biological effects on in-place pollutants: Neoplasia in fish and related causal factors in the Detroit River system (Appendix Q). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix Q. #1988-4
- Maccubbin, A.E., J. Black, and J.C. Harshbarger. 1988. A case report of hepatocellular neoplasia in bowfin, *Amia calva* L. (Appendix R). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix R. (Also published in *Journal of Fish Diseases* 10(4):329-331.). #1988-4
- Maccubbin, A.E. and N. Ersing. 1991. Tumors in fish from the Detroit River. *Hydrobiologia* 219:301-306. #1991-18
- Maccubbin, A.E., N. Ersing, and M.E. Frank. 1991. Mutagenicity of sediments from the Detroit River. *J. Great Lakes Res.* 17(3):314-321. #1991-19
- Macek, K. J.; Buxton, K. S.; Derr, S. K.; Dean, J. W., and Sauter, S. Chronic toxicity of lindane to selected aquatic invertebrates and fishes. EPA 600/3-76/046. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 68-01-0154 Contract # 68-01-1841. Project officer: J.G. Eaton
- Macek, K. J.; Buxton, K. S.; Sauter, S.; Gnilka, S., and Dean, J. W. Chronic toxicity of atrazine to selected aquatic invertebrates and fishes. EPA 600/3-76/047. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 68-01-0092 Contract # 68-01-1844. Project officer: J. Eaton
- Macek, K. J.; Lindberg, M. A.; Sauter, S.; Buxton, K. S., and Costa, P. A. Toxicity of four pesticides to water fleas and fathead minnows. EPA 600/3-76/099. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 68-01-0738. Notes: Project officer: A. Jarvinen
- Mackenthun, A.A. and H.G. Stefan. 1994. Experimental study of sedimentary oxygen demand in lakes: Dependence on near-bottom flow velocities and sediment properties. Project Report No. 358, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis, MN. Prepared for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1994-

- Mackie, G. L.; White, D. S., and Zdeba, T. W. A guide to freshwater mollusks of the Laurentian Great Lakes with special emphasis on the genus *Pisidium*. EPA 600/3-80-068. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # 805333. Project officer: N.A. Thomas
- Magnuson, J.J., K.E. Webster, R.A. Assel, C.J. Bowser, P.J. Dillon, J.G. Eaton, H.E. Evans, E.J. Fee, R.I. Hall, L.R. Mortsch, D.W. Schindler, and F.H. Quinn. 1997. Potential effects of climate changes on aquatic systems: Laurentian Great Lakes and Precambrian Shield region. *Hydro. Processes* 11:825-871. #1997-10
- Magnuson, V.R., D.K. Harriss, M.S. Sun, D.K. Taylor, and G.E. Glass. 1979. Relationships of activities of metal-ligand species to aquatic toxicity. In: *Chemical modeling in aqueous systems*. ACS Symposium Series No. 93. E.A. Jenne, ed. Pp. 635-655. American Chemical Society. #1979-3
- Magnuson, J. J.; Forbes, A. M.; Harrell, D. M., and Schwarzmeyer, J. D. Responses of stream invertebrates to an ashpit effluent : Wisconsin power plant impact study. EPA 600/3-80/081. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant no. R803971. Project officer: G.E. Glass
- Magnuson, J. J.; Rahel, F. J.; Talbot, M. J. Forbes A. M., and Medvick, P. A. Ecological studies of fish near a coal-fired generating station and related laboratory studies : Wisconsin Power Plant Impact Study. EPA 600/3-80/078. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803971. Project officer: G.E. Glass
- Maier, W.J. and W.R. Swain. 1978. Lake Superior organic carbon budget. *Water Research* 12(6):403-412. #1978-6
- Makynen, E. A., M. D. Kahl, K. M. Jensen, J. E. Tietge, K. L. Wells, G. Van der Kraak, and G. T. Ankley. 2000. Effects of the mammalian antiandrogen vinclozolin on development and reproduction of the fathead minnow (*Pimephales promelas*). *Aquat. Toxicol.* 48:461-75 #735
- Mancy, K. H. and Allen, H. E. A controlled bioassay system for measuring toxicity of heavy metals. EPA 600/3-77/037. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 14-12-591. Project officer: G.E. Glass
- Marcus, M. D.; Bergman, H. L.; Stoller, D. A.; Brown, S. K., and Molholt, P. A., compilers. Bibliography of aquatic ecosystem effects, analytical methods and treatment technologies for organic compounds in advanced fossil-fuel processing effluents. EPA 600/3-80/026. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, IAG ET-77-S-03-1761 IAG ET-78-C-03-1761 IAG DE-AS20-79-LC-01761. Project officers: K. Biesinger, L. Mueller, D. Farrier and L. Harrington
- Marchini, S., M. L. Tosato, T. J. Norberg-King, D. E. Hammermeister, and M. D. Hoglund. 1992. Lethal and sublethal toxicity of benzene derivatives to the fathead minnow, using a short-term test. *Environ. Toxicol. Chem.* 11:187-95 #483
- Marquis, P. J., M. Hackett, L. G. Holland, M. L. Larsen, B. C. Butterworth, and D. W. Kuehl. 1994. Analytical methods for a national study of chemical residues in fish I: Polychlorinated dibenzo-p-dioxins/dibenzofurans. *Chemosphere*. 29:495-508 #540
- Marquis, P. J., R. L. Hanson, M. L. Larsen, W. M. DeVita, B. C. Butterworth, and D. W. Kuehl. 1994. Analytical methods for a national study of chemical residues in fish II: Pesticides and polychlorinated biphenyls. *Chemosphere*. 29:509-21 #541
- Marsh, D. M. and P. C. Trenham. 2001. Metapopulation dynamics and amphibian conservation. *Conservation Biology*. 15:40-49 #755
- Martin, D. B. and Novotny, J. F. Studies to determine methods for culturing three freshwater zooplankton species. EPA 660/3-75-010. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, EPA IAG 0152(D). Project officer: R.E. Siefert
- Martin, J.L., W.L. Richardson, and S.C. McCutcheon. 1991. Modeling studies for planning: The Green Bay Project. *Water Resour. Bull.* 27(3):429-436. #1991-28
- Martin, S.C., S.C. Hinz, P.W. Rodgers, V.J. Bierman, Jr., J.V. DePinto, and T.C. Young. 1995. Calibration of a hydraulic transport model for Green Bay, Lake Michigan. *J. Great Lakes Res.*, 21(4):599-609. #1995-23
- Martinez, N.D. 1991. Artifacts or attributes? Effects of resolution on the Little Rock Lake food web.

- Ecological Monographs 61(4):367-392. #1991-13
- Marvin, C., S. Painter, D. Williams, V. Richardson, R. Rossmann, and P. Van Hoof. 2004. Spatial and temporal trends in surface water and sediment contamination in the Laurentian Great Lakes. *Environ. Pollution*, 129:131-144. #2004-2
- Masscheleyn, P.H., R.D. Delaune, and W.H. Patrick, Jr. 1991. Arsenic and selenium chemistry as affected by sediment redox potential and pH. *Journal of Environmental Quality* 20(3): 522-527. #1991-3
- Masscheleyn, P.H., R.D. Delaune, and W.H. Patrick, Jr. 1991. Effect of redox potential and pH on arsenic speciation and solubility in a contaminated soil. *Environ. Sci. Technol.* 25(8):1414-1419. #1991-4
- Masscheleyn, P.H., R.D. DeLaune, and W.H. Patrick, Jr. 1991. A hydride generation atomic absorption technique for arsenic speciation. *J. Environ. Qual.* 20:96-100. #1991-10
- Masscheleyn, P.H., J.H. Pardue, R.D. DeLaune, and W.H. Patrick, Jr. 1992. Chromium redox chemistry in a Lower Mississippi Valley bottomland hardwood wetland. *Environ. Sci. Technol.* 26(6):1217-1226. #1992-10
- Matthiessen, P., T. Reynoldson, Z. Billinghamst, D.W. Brassard, P. Cameron, G.T. Chandler, I.M. Davies, T. Horiguchi, D.R. Mount, J. Oehlmann, T.G. Pottinger, P.K. Sibley, H.M. Thompson, and A.D. Vethaak. 1999. Field assessment for endocrine disruption in invertebrates. In: *Endocrine Disruption in Invertebrates: Endocrinology, Testing, and Assessment*. deFur, P.L., et al, eds., pp. 199-270, Society of Environmental Toxicology and Chemistry (SETAC) . #1999-8
- Mattson, V. R.; Arthur, J. W., and Walbridge, C. T. Acute toxicity of selected organic compounds to fathead minnows. EPA 600/3-76/097. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mattson, V.R., G.L. Phipps, G.T. Ankley, P.A. Kosian, B.R. Sheedy, and J.S. Cox. 199? Uptake and depuration of polycyclic aromatic hydrocarbons by the oligochaete (*Lumbriculus variegatus*). Unpublished paper. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #199?-8
- May, B. and J.E. Marsden. 1992. Genetic identification and implications of another invasive species of dreissenid mussel in the Great Lakes. *Can. J. Fish. Aquat. Sci.* 49:1501-1506. #1992-9
- Mayer, F.L., Jr.; Mehrle, P. M., Jr., and Dwyer, W. P. Toxaphene: chronic toxicity to fathead minnows and channel catfish. EPA 600/3-77/069. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # EPA-IAG-141(D). Project officer: L.H. Mueller
- Mayer, F.L. Toxaphene effects on reproduction, growth, and mortality of brook trout. EPA 600/3-75-013. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # EPA-IAG-0153 (D). Project officer: L.H. Mueller
- McCauley, R. W. Seasonal effects on temperature preference in yellow perch, *Perca flavescens*. EPA 600/3-77/088. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802467. Project officer: K.E.F. Hokanson
- McCormick, J. H. 1978. Effects of temperature on hatching success and survival of larvae in the white bass. *Prog. Fish-Cult.* 40:133-37 #177
- McCormick, J. H., S. J. Broderius, and J. T. Fiandt. 1984. Toxicity of ammonia to early life stages of the green sunfish *Lepomis cyanellus*. *Environ. Pollut. Ser. A*. 36:147-63 #284
- McCormick, J. H., K. E. F. Hokanson, and B. R. Jones. 1972. Effects of temperature on the growth and survival of young brook trout, *Salvelinus fontinalis*. *J. Fish. Res. Board Can.* 29:1107-12 #71
- McCormick, J. H. and K. M. Jensen. 1992. Osmoregulatory failure and death of first-year largemouth bass (*Micropterus salmoides*) exposed to low pH and elevated aluminum, at low temperature in soft water. *Can. J. Fish. Aquat. Sci.* 49:1189-97 #484
- McCormick, J. H., K. M. Jensen, and L. E. Anderson. 1989. Chronic effects of low pH and elevated aluminum on survival, maturation, spawning and embryo-larval development of the fathead minnow in soft water. *Water Air Soil Pollut.* 43:293-307 #392
- McCormick, J. H., K. M. Jensen, and R. L. Leino. 1989. Survival, blood osmolality, and gill morphology of juvenile yellow perch, rock bass, black crappie, and largemouth bass exposed to acidified soft water. *Trans. Am. Fish. Soc.* 118:386-99 #393
- McCormick, J. H., K. M. Jensen, R. L. Leino, and G. N. Stokes. 1987. Fish blood osmolality, gill histology,

- and oocyte atresia as early warning acid stress indicators. *Ann. Soc. R. Zool. Bel.* 117 (Supplement 1):309-19 #350
- McCormick, J. H., B. R. Jones, and K. E. F. Hokanson. 1977. White sucker (*Catostomus commersoni*) embryo development, and early growth and survival at different temperatures. *J. Fish. Res. Board Can.* 34:1019-25 #156
- McCormick, J. H., B. R. Jones, and R. F. Syrett. 1971. Temperature requirements for growth and survival of larval ciscos (*Coregonus artedii*). *J. Fish. Res. Board Can.* 28:924-27 #56
- McCormick, J. H. and C. F. Kleiner. 1976. Growth and survival of young-of-the-year emerald shiners (*Notropis atherinoides*) at different temperatures. *J. Fish. Res. Board Can.* 33:839-42 #134
- McCormick, J. H. and R. L. Leino. 1999. Factors contributing to first-year recruitment failure of fishes in acidified waters with some implications for environmental research. *Trans. Am. Fish. Soc.* 128:265-77 #724
- McCormick, J. H. and H. A. Podoliak. 1984. Gallbladder color and relative fullness as a field technique for estimating time since last feeding in brook trout. *N. Am. J. Fish. Manage.* 4:566-68 #285
- McCormick, J. H. and G. N. Stokes. 1982. Intraovarian invasion of smallmouth bass oocytes by *Proteocephalus ambloplitis* (Cestoda). *J. Parasitol.* 68:973-75 #245
- McCormick, J. H., G. N. Stokes, and R. O. Hermanutz. 1989. Oocyte atresia and reproductive success in fathead minnows (*Pimephales promelas*) exposed to acidified hardwater environments. *Arch. Environ. Contam. Toxicol.* 18:207-14 #394
- McCormick, J. H. and J. A. Wegner. 1981. Responses of largemouth bass from different latitudes to elevated water temperatures. *Trans. Am. Fish. Soc.* 110:417-29 #224
- McCormick, J.H. 2002. Who, when, where, what, and how long. *SETAC Globe*, Mar.-Apr., pp. 20-21. #2002-4
- McCormick, J.H., K.M. Jensen, W.A. Swenson, T.D. Simonson, and R.L. Leino. 1991. Overwintering, key to first year largemouth bass recruitment in acidified northern waters (abstract only). In: *Proceedings of the Seventeenth Annual Aquatic Toxicity Workshop*, November 5-7, 1990, Vancouver, B.C. P. Chapman, F. Bishay, E. Power, K. Hall, L. Harding, D. McLeay, M. Nassichuk and W. Knapp, eds. Page 240. Fisheries and Oceans, Canada. #1991-25
- McCormick, J.H., M.J. Ross, and D.B. Siniff. 1981. Where do yellow perch (*Perca flavescens*) go in winter when given the option between normal ice covered water or a heated discharge. In: *Proceedings of the Seventh Annual Aquatic Toxicity Workshop*, November 5-7, 1980, Ottawa, Ontario. N. Bermingham, C. Blaise, P. Couture, B. Hummel, G. Joubert, and M. Speyer, eds. Pp. 33-45. Canadian Technical Report of Fisheries and Aquatic Sciences No. 990, Department of Fisheries and Oceans, Montreal, Quebec. #1981-17
- McCormick, J.H., G.N. Stokes, and G.J. Portele. 1980. Environmental acidification impact detection by examination of mature fish ovaries. In: *Proceedings of the Sixth Annual Aquatic Toxicity Workshop*, November 6-7, 1979, Winnipeg, Manitoba. J.F. Klaverkamp, S.L. Leonhard, and K.E. Marshall, eds. Pp. 41-48. Canadian Technical Report of Fisheries and Aquatic Sciences No. 975, Department of Fisheries and Oceans, Winnipeg, Manitoba. #1980-16
- McCormick, J.H. and R.F. Syrett. 1970. A modular controlled-temperature apparatus for fish egg incubation and fry rearing. Unpublished report. National Water Quality Laboratory, Federal Water Quality Administration, U.S. Department of the Interior, Duluth, MN. #1970-4
- McCormick, J. H. Effects of temperature on hatching success and survival of larvae in the white bass. EPA 600/3-77/075. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- McCormick, J. H. Temperature effects on young yellow perch, *Perca flavescens* (Mitchill). EPA 600/3-76/057. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- McIlroy, L.M., J.V. DePinto, T.C. Young, and S.C. Martin. 1986. Partitioning of heavy metals to suspended solids of the Flint River, Michigan. *Environmental Toxicology and Chemistry* 5:609-623. #1986-10
- McKee, J.D., T.P. Wilson, D.T. Long, and R.M. Owen. 1989. Geochemical partitioning of Pb, Zn, Cu, Fe, and Mn across the sediment-water interface in large lakes. *J. Great Lakes Res.* 15(1):46-58. #1989-18
- McKim, J. M. 1977. Evaluation of tests with early life stages of fish for predicting long-term toxicity. *J. Fish. Res. Board Can.* 34:1148-54 #157

- McKim, J. M., R. L. Anderson, D. A. Benoit, R. L. Spehar, and G. N. Stokes. 1976. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 48:1544-620 #135
- McKim, J. M., J. W. Arthur, and T. W. Thorslund. 1975. Toxicity of a linear alkylate sulfonate detergent to larvae of four species of freshwater fish. *Bull. Environ. Contam. Toxicol.* 14:1-7 #119
- McKim, J. M. and D. A. Benoit. 1974. Duration of toxicity tests for establishing "no effect" concentrations for copper with brook trout (*Salvelinus fontinalis*). *J. Fish. Res. Board Can.* 31:449-52 #108
- McKim, J. M. and D. A. Benoit. 1971. Effects of long-term exposures to copper on the survival, growth, and reproduction of brook trout (*Salvelinus fontinalis*). *J. Fish. Res. Board Can.* 28:655-62 #57
- McKim, J. M., D. A. Benoit, K. E. Biesinger, W. A. Brungs, and R. E. Siefert. 1975. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 47:1711-68 #120
- McKim, J. M., S. P. Bradbury, and G. J. Niemi. 1987. Fish acute toxicity syndromes and their use in the QSAR approach to hazard assessment. *Environ. Health Perspect.* 71:171-86 #351
- McKim, J. M., G. M. Christensen, and E. P. Hunt. 1970. Changes in the blood of brook trout (*Salvelinus fontinalis*) after short-term and long-term exposure to copper. *J. Fish. Res. Board Can.* 27:1883-89 #45
- McKim, J. M., G. M. Christensen, J. H. Tucker, D. A. Benoit, and M. J. Lewis. 1973. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 45:1370-1407 #92
- McKim, J. M., G. M. Christensen, J. H. Tucker, D. A. Benoit, and M. J. Lewis. 1974. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 46:1540-1591 #109
- McKim, J. M., J. G. Eaton, and G. W. Holcombe. 1978. Metal toxicity to embryos and larvae of eight species of freshwater fish - II: Copper. *Bull. Environ. Contam. Toxicol.* 19:608-16 #178
- McKim, J. M. and R. J. Erickson. 1991. Environmental impacts on the physiological mechanisms controlling xenobiotic transfer across fish gills. *Physiol. Zool.* 64:39-67 #455
- McKim, J. M. and H. M. Goeden. 1982. A direct measure of the uptake efficiency of a xenobiotic chemical across the gills of brook trout (*Salvelinus fontinalis*) under normoxic and hypoxic conditions. *Comp. Biochem. Physiol.* 72C:65-74 #246
- McKim, J. M. and E. M. Heath. 1983. Dose determinations for waterborne 2,5,2',5'-[¹⁴C]tetrachlorobiphenyl and related pharmacokinetics in two species of trout (*Salmo gairdneri* and *Salvelinus fontinalis*): A mass-balance approach. *Toxicol. Appl. Pharmacol.* 68:177-87 #264
- McKim, J. M., R. C. Kolanczyk, G. J. Lien, and A. D. Hoffman. 1999. Dynamics of renal excretion of phenol and major metabolites in the rainbow trout (*Oncorhynchus mykiss*). *Aquat. Toxicol.* 45:265-77 #706
- McKim, J. M., G. J. Lien, A. D. Hoffman, and C. T. Jenson. 1999. Respiratory-cardiovascular physiology and xenobiotic gill flux in the lake trout (*Salvelinus namaycush*). *Comp. Biochem. Physiol. Part A.* 123:69-81 #716
- McKim, J. M., J. W. Nichols, G. J. Lien, and S. L. Bertelsen. 1994. Respiratory-cardiovascular physiology and chloroethane gill flux in the channel catfish, *Ictalurus punctatus*. *J. Fish Biol.* 44:527-47 #542
- McKim, J. M., J. W. Nichols, G. J. Lien, A. D. Hoffman, C. A. Gallinat, and G. N. Stokes. 1996. Dermal absorption of three waterborne chloroethanes in rainbow trout (*Oncorhynchus mykiss*) and channel catfish (*Ictalurus punctatus*). *Fundam. Appl. Toxicol.* 31:218-28 #623
- McKim, J. M., G. F. Olson, G. W. Holcombe, and E. P. Hunt. 1976. Long-term effects of methylmercuric chloride on three generations of brook trout (*Salvelinus fontinalis*): Toxicity, accumulation, distribution, and elimination. *J. Fish. Res. Board Can.* 33:2726-39 #136
- McKim, J. M., P. K. Schmieder, R. W. Carlson, E. P. Hunt, and G. J. Niemi. 1987. Use of respiratory-cardiovascular responses of rainbow trout (*Salmo gairdneri*) in identifying acute toxicity syndromes in fish: Part 1. Pentachlorophenol, 2,4-dinitrophenol, tricaine methanesulfonate, and 1-octanol. *Environ. Toxicol. Chem.* 6:295-312 #352
- McKim, J. M., P. K. Schmieder, and R. J. Erickson. 1986. Toxicokinetic modeling of [¹⁴C]pentachlorophenol in the rainbow trout (*Salmo gairdneri*). *Aquat. Toxicol.* 9:59-80 #327
- McKim, J. M., P. K. Schmieder, G. J. Niemi, R. W. Carlson, and T. R. Henry. 1987. Use of respiratory-cardiovascular responses of rainbow trout (*Salmo gairdneri*) in identifying acute toxicity syndromes in fish: Part 2. Malathion, carbaryl, acrolein, and benzaldehyde. *Environ. Toxicol. Chem.* 6:313-28 #353
- McKim, J. M., P. K. Schmieder, and G. D. Veith. 1985. Absorption dynamics of organic chemical transport across trout gills as related to octanol-water partition coefficient. *Toxicol. Appl. Pharmacol.* 77:1-10 #299

- McKim, J. M. and R. F. Syrett. 1982. Mobile surgical table with automatic solenoid system for fishery applications. *Prog. Fish-Cult.* 44:75-78 #247
- McKim, J. M., Jr., J. M. McKim, S. Naumann, D. E. Hammermeister, A. D. Hoffman, and C. D. Klaassen. 1993. *In vivo* microdialysis sampling of phenol and phenyl glucuronide in the blood of unanesthetized rainbow trout: Implications for toxicokinetic studies. *Fundam. Appl. Toxicol.* 20:190-198 #506
- McKim, J.M. 1985. Early life stage toxicity tests. In: *Principles of aquatic toxicology*. G. Rand and S. Petrocelli, eds. Pp. 58-95. Hemisphere, New York, NY. #1985-25
- McKim, J.M. 1995. Early life stage toxicity tests. In: *Fundamentals of aquatic toxicology: Effects, environmental fate, and risk assessment, 2nd ed.* G.M. Rand, ed. Pp. 974-1011. #1995-12
- McKim, J.M. 1994. Physiological and biochemical mechanisms that regulate the accumulation and toxicity of environmental chemicals in fish. In: *Bioavailability: Physical, chemical, and biological interactions*. J.L. Hamelink, P.F. Landrum, H.L. Bergman, and W.H. Benson, eds. Pp. 179-201. Lewis Publishers, Boca Raton, FL. #1994-7
- McKim, J.M. 1991. Pollution's effects. In: *Trout of North America*. J. Stoltz and J. Schnell, eds. Pp. 118-125. Stackpole Press, Harrisburg, PA. #1991-23
- McKim, J.M. 1974. Statement of James M. McKim (mercury toxicity in fish). Unpublished statement. #1974-5
- McKim, J.M. and G.J. Lien. 2001. Toxic responses of the skin. In: *Target Organ Toxicity in Marine and Freshwater Teleosts*. Schlenk, D. and Benson, W.H., eds. pp. 151-223 Taylor & Francis, New York, NY. #2001-13
- McKim, J.M. and J.W. Nichols. 1994. Use of physiologically based toxicokinetic models in a mechanistic approach to aquatic toxicology. In: *Aquatic toxicology: Molecular, biochemical, and cellular perspectives*. D.C. Malins and G.K. Ostrander, eds. Pp. 469-519. Lewis Publishers, Boca Raton, FL. #1994-6
- McKim, J.M. and P.K. Schmieder. 1991. Bioaccumulation: Does it reflect toxicity? In: *Bioaccumulation in aquatic systems*. R. Nagel and R. Loskill, eds. Pp. 162-188. VCH Verlagsgesellschaft, New York, NY. #1991-22
- McMaster, M.E., J.J. Jardine, G.T. Ankley, W.H. Benson, M.S.Jr. Greeley, T.S. Gross, L.J.Jr. Guillette, D.L. MacLatchy, E.F. Orlando, G.J. Van der Kraak, and K.R. Munkittrick. 2001. An interlaboratory study on the use of steroid hormones in examining endocrine disruption. *Environ. Toxicol. Chem.*, 20(9):2081-2087. #2001-9
- McNaught, D.C. 1989. Functional bioassays utilizing zooplankton: A comparison. *Hydrobiologia* 188/189:117-121. #1989-13
- McNaught, D.C., S.D. Bridgman, and C. Meadows. 1988. Effects of complex effluents from the River Raisin on zooplankton grazing in Lake Erie. In: *Functional testing of aquatic biota for estimating hazards of chemicals*. Cairns, J., Jr. and J.R. Pratt, eds. ASTM STP 988. American Society for Testing and Materials, Philadelphia, PA. Pp. 128-137. #1988-23
- McNaught, D.C. and D.I. Mount. 1986. Appropriate durations and measures for *Ceriodaphnia* toxicity tests. In: *Aquatic toxicology and hazard assessment: Eighth symposium*. R.C. Bahner and D.J. Hansen, eds. Pp. 375-381. ASTM STP 891. American Society for Testing and Materials, Philadelphia, PA. #1986-33
- McNaught, D. C.; Buzzard, M.; Griesmer, D., and Kennedy, M. Zooplankton grazing and population dynamics relative to water quality in southern Lake Huron. EPA 600/3-80/069. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803178.
- McNaught, D. C.; Griesmer, D.; Buzzard, M., and Kennedy, M. PCBs in Saginaw Bay: Development of functional indices to estimate inhibition of ecosystem fluxes. EPA 600/3-84-008. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB84-133008): Grant # 804573.
- McNaught, D. C.; Buzzard, M., and Levine, S. Zooplankton production in Lake Ontario as influenced by environmental perturbations. EPA 660/3-75/021. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant 800536. Project officer: N.A. Thomas
- McNeil, J., C. Taylor, and W. Lick. 1996. Measurements of erosion of undisturbed bottom sediments with depth. *Journal of Hydraulic Engineering*, 122(6):316-324. #1996-22

- McTavish, K., H. Stech, and F.S. Stay. 1998. A modeling framework for exploring the population-level effects of endocrine disruptors. *Environ. Toxicol. Chem.*, 17(1):58-67. #1998-7
- Merna, J. W. and Eisele, P. J. The effects of methoxychlor on aquatic biota. EPA R3-73-046. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Grant # 18050-DLO. Project officer: W. Brungs
- Mekennyan, O., S. Dimitrov, P. Schmieder, and G. Veith. 2003. *In silico* modelling of hazard endpoints: current problems and perspectives. *SAR and QSAR in Environ. Res.* 14:361-71 #820
- Mekennyan, O., J. Ivanov, S. Karabunarliev, S. P. Bradbury, G. T. Ankley, and W. Karcher. 1997. A computationally-based hazard identification algorithm that incorporates ligand flexibility. 1. Identification of potential androgen receptor ligands. *Environ. Sci. Technol.* 31:3702-11 #662
- Mekennyan, O., N. Nikolova, S. Karabunarliev, S. P. Bradbury, G. T. Ankley, and B. Hansen. 1999. New developments in a hazard identification algorithm for hormone receptor ligands. *Quant. Struct.-Act. Relat.* 18:139-53 #717
- Mekennyan, O. G., G. T. Ankley, G. D. Veith, and D. J. Call. 1994. QSAR estimates of excited states and photoinduced acute toxicity of polycyclic aromatic hydrocarbons. *SAR and QSAR in Environ. Res.* 2:237-47 #543
- Mekennyan, O. G., G. T. Ankley, G. D. Veith, and D. J. Call. 1994. QSARs for photoinduced toxicity: I. Acute lethality of polycyclic aromatic hydrocarbons to *Daphnia magna*. *Chemosphere*. 27:567-82 #544
- Mekennyan, O. G., G. T. Ankley, G. D. Veith, and D. J. Call. 1995. QSARs for photoinduced toxicity of aromatic compounds . *SAR and QSAR in Environ. Res.* 4:139-45 #573
- Mekennyan, O. G., S. P. Bradbury, and V. B. Kamenska. 1996. Estimating one-electron reduction potentials of quinones. *SAR and QSAR in Environ. Res.* 5:255-68 #640
- Mekennyan, O. G., J. M. Ivanov, G. D. Veith, and S. P. Bradbury. 1994. Dynamic QSAR: A new search for active conformations and significant stereoelectronic indices. *Quant. Struct.-Act. Relat.* 13:302-7 #545
- Mekennyan, O. G., V. Kamenska, P. K. Schmieder, G. T. Ankley, and S. P. Bradbury. 2000. A computationally based identification algorithm for estrogen receptor ligands: Part 2. Evaluation of a hER α binding affinity model. *Toxicological Sciences*. 58:270-281 #751
- Mekennyan, O. G., T. W. Schultz, G. D. Veith, and V. Kamenska. 1996. 'Dynamic' QSAR for semicarbazide-induced mortality in frog embryos. *J. Appl. Toxicol.* 16:355-63 #652
- Mekennyan, O. G. and G. D. Veith. 1994. The electronic factor in QSAR: MO-parameters, competing interactions, reactivity and toxicity. *SAR and QSAR in Environ. Res.* 2:129-43 #546
- Mekennyan, O. G. and G. D. Veith. 1993. Relationships between descriptors for hydrophobicity and soft electrophilicity in predicting toxicity. *SAR and QSAR in Environ. Res.* 1:335-44 #507
- Mekennyan, O. G. and G. D. Veith. 1995. Synergism between QSAR modeling and physico-chemical principles. *SAR and QSAR in Environ. Res.* 4:155-65 #574
- Mekennyan, O. G., G. D. Veith, S. P. Bradbury, and C. L. Russom. 1993. Structure-toxicity relationships for α , β - unsaturated alcohols in fish. *Quant. Struct.-Act. Relat.* 12:132-36 #508
- Mekennyan, O. G., G. D. Veith, S. P. Bradbury, and N. Zaharieva. 1995. SAR models for metabolic activation: Stability of organic cation intermediates. *Quant. Struct.-Act. Relat.* 14:264-69 #575
- Mekennyan, O. G., G. D. Veith, D. J. Call, and G. T. Ankley. 1996. A QSAR evaluation of Ah receptor binding of halogenated aromatic xenobiotics. *Environ. Health Perspect.* 104:1302-10 #624
- Mekennyan, O.G., J. Ivanov, S. Karabunarliev, B. Hansen, G. Ankley, and S. Bradbury. 1997. A new approach for estimating 3-dimensional similarity that incorporates molecular flexibility. In: *Quantitative Structure-Activity Relationships in Environmental Sciences - VII*, Ch. 4, SETAC Press, pp. 39-57. #1997-13
- Mekennyan, O.G., N. Nikolova, and P. Schmieder. 2003. Dynamic 3D QSAR techniques: applications in toxicology. *Journal of Molecular Structure (Theochem)*, 622:147-165. #2003-11
- Mekennyan, O.G., G.T. Ankley, G.D. Veith, and D.J. Call. 1997. Photo-induced toxicity of PAHs: QSAR models and environmental significance. In: *Geosciences and water resources: Environmental data modeling*. C. Bardinet and J.-J. Royer, eds. Pp. 263-271. Springer-Verlag, Germany. #1997-5
- Meyn, E.L., R.K. Zajdel, and R.V. Thurston. 1984. Acute toxicity of ferrocyanide and ferricyanide to rainbow trout (*Salmo gairdneri*). Technical Report No. 84-1. Fisheries Bioassay Laboratory, Montana State University, Bozeman, MT. #1984-11

- Mizera, J.J., C.L. Cooper, and C.E. Herdendorf. 1981. Limnetic larval fish in the nearshore zone of the western basin of Lake Erie. *J. Great Lakes Res.* 7(1):62-64. #1981-12
- Modeling Task Force. 1987. Large lake models - uses, abuses, and future. *J. Great Lakes Res.* 13(3):387-396. #1987-27
- Moffett, M.F., L.E. Anderson, T. Corry, M.P. Hanratty, L.J. Heinis, M.L. Knuth, K. Liber, S.L. O'Halloran, K.L. Schmude, F.S. Stay, and D.K. Tanner. 1995. Effects, persistence and distribution of diflubenzuron in littoral enclosures. Final report. Mid-Continent Ecology Division, U.S. Environmental Protection Agency, Duluth, MN. #1995-1
- Mohseni, O., T.R. Erickson, and H.G. Stefan. 1997. A non-linear regression model for weekly stream temperatures at 585 gaing stations in the U.S. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1997-15
- Mohseni, O., T.R. Erickson, and H.G. Stefan. 1998. Projection of climate change effects on stream temperatures in the U.S. Grazing Lands Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, El Reno, OK. #1998-15
- Mohseni, O. and H.G. Stefan. 1994. Climate change effect on water resources. Part 1: Evaporation. External Memorandum No. M-238, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis, MN. Prepared for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1994-13
- Mohseni, O. and H.G. Stefan. 2000. Projections of fish survival in US streams after global warming. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC and Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #2000-16
- Mohseni, O., H.G. Stefan, and J.G. Eaton. 2003. Global warming and potential changes in fish habitat in U.S. streams. *Climatic Change*, 59:389-409. #2003-10
- Moll, R.A., D. Jude, R. Rossmann, G.V. Kantak, J. Barres, S. DeBoe, J. Giesy, and M. Tuchman. 1995. Movement and loadings of inorganic contaminants through the lower Saginaw River. *J. Great Lakes Res.* 21(1):17-34. #1995-11
- Monson, P. D., G. T. Ankley, and P. A. Kosian. 1995. Phototoxic response of *Lumbriculus variegatus* to sediments contaminated by polycyclic aromatic hydrocarbons. *Environ. Toxicol. Chem.* 14:891-94 #576
- Monson, P. D., D. J. Call, D. A. Cox, K. Liber, and G. T. Ankley. 1999. Photoinduced toxicity of fluoranthene to northern leopard frogs (*Rana pipiens*). *Environ. Toxicol. Chem.* 18:308-12 #696
- Morden, R. D. Static coal storage -- Biological effects on the aquatic environment. EPA 600/3-80/083c. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB80-221583): Grant # R803937-02-0. Project officer: F. Puglisi
- Morrice, J.A., C.N. Dahm, H.M. Valett, P.V. Unnikrishna, and H.M. Campana. 2000. Terminal electron accepting processes in the alluvial sediments of a headwater stream. *J. N. Am. Benthol. Soc.*, 19(4):593-608. #2000-8
- Morrice, J.A., H.M. Valett, C.N. Dahm, and M.E. Campana. 1997. Alluvial characteristics, groundwater-surface water exchange and hydrological retention in headwater streams. *Hydrological Processes*, vol. 11, pp. 253-267. #1997-14
- Morris, D.D. 1973. Toxicity of cyanide, chromium, cadmium, copper, lead, nickel, and zinc. Summary report. Unpublished report. #1973-10
- Morrison, T.W., W.E. Lynch, Jr., and K. Dabrowski. 1997. Predation on zebra mussels by freshwater drum and yellow perch in western Lake Erie. *J. Great Lakes Res.* 23(2):177-189. #1997-7
- Morton, P., D. Marklund, S. Kohlbry, D. Longrie-Kline, C. Harper, J. Tan, and G.J. Niemi. 1985. Properties of fine particles which govern their biological activity. Volumes 1 & 2. Cooperative Agreement #CR807482. Submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN by University of Minnesota-Duluth, Duluth, MN. #1985-1
- Mosquito Control Technology (R.D. Sjogren). 1984. Assessment of the effects of chlorpyrifos larvicide on non-target, aquatic organisms in mosquito control areas. Final report submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN by Mosquito Control Technology, North Oaks, MN. #1984-1
- Mount, D. I. 1964. Additional information on a system for controlling the dissolved oxygen content of water. *Trans. Am. Fish. Soc.* 93:100-103 #1
- Mount, D. I. 1964. An autopsy technique for zinc-caused fish mortality. *Trans. Am. Fish. Soc.* 93:174-82

#2

- Mount, D. I. 1973. Chronic effect of low pH on fathead minnow survival, growth and reproduction. *Water Res.* 7:987-93 #93
- Mount, D. I. 1968. Chronic toxicity of copper to fathead minnows (*Pimephales promelas*, Rafinesque). *Water Res.* 2:215-23 #19
- Mount, D. I. 1966. The effect of total hardness and pH on acute toxicity of zinc to fish. *Air Water Pollut. Int. J.* 10:49-56 #4
- Mount, D. I. and H. W. Boyle. 1969. Parathion--use of blood concentration to diagnose mortality of fish. *Environ. Sci. Technol.* 3:1183-85 #32
- Mount, D. I. and W. A. Brungs. 1967. A simplified dosing apparatus for fish toxicology studies. *Water Res.* 1:21-29 #11
- Mount, D. I. and T. J. Norberg. 1984. A seven-day life-cycle cladoceran toxicity test. *Environ. Toxicol. Chem.* 3:425-34 #286
- Mount, D. I. and C. E. Stephan. 1969. Chronic toxicity of copper to the fathead minnow (*Pimephales promelas*) in soft water. *J. Fish. Res. Board Can.* 26:2449-57 #33
- Mount, D. I. and C. E. Stephan. 1967. A method for detecting cadmium poisoning in fish. *J. Wildl. Manage.* 31:168-72 #12
- Mount, D. I. and C. E. Stephan. 1967. A method for establishing acceptable toxicant limits for fish--malathion and the butoxyethanol ester of 2,4-D. *Trans. Am. Fish. Soc.* 96:185-93 #13
- Mount, D. I., L. W. Vigor, and M. L. Schafer. 1966. Endrin: Use of concentration in blood to diagnose acute toxicity to fish. *Science.* 152:1388-90 #5
- Mount, D. I. Methods for aquatic toxicity identification evaluations. Phase III: toxicity confirmation procedures. EPA 600/3-88/036. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (National Effluent Toxicity Assessment Center technical report 04-88).
- Mount, D. I. and Anderson-Carnahan, L. Methods for aquatic toxicity identification evaluations. Phase I: toxicity characterization procedures. EPA 600/3-88/034. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (National Effluent Toxicity Assessment Center technical report 02-88).
- Mount, D.I. Methods for aquatic toxicity identification evaluations. Phase II: toxicity identification procedures. EPA 600/3-88/035. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (National Effluent Toxicity Assessment Center technical report 02-88).
- Mount, D. I. and Norberg-King, T. Validity of effluent and ambient toxicity tests for predicting biological impact, Kanawha River, Charleston, West Virginia. EPA 600/3-86-006. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mount, D. I.; Norberg-King, T., and Steen, A. E. Validity of effluent and ambient toxicity tests for predicting biological impact, Naugatuck River, Waterbury, Connecticut. EPA 600/8-86-005. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mount, D. I.; Norberg-King, T. J.; Ankley, G. T.; Burkhard, L. P.; Durhan, E. J.; Schubauer-Berigan, M. K., and Lukasewycz, M. T. Methods for aquatic toxicity identification evaluations: Phase III toxicity confirmation procedures for samples exhibiting acute and chronic toxicity. EPA 600/R-92-081. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mount, D. I. and Norberg-King, T. J., eds. Validity of effluent and ambient toxicity tests for predicting biological impact, Scippo Creek, Circleville, Ohio. EPA 600/3-85-044. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mount, D. I.; Steen, A. E., and Norberg-King, T. Validity of effluent and ambient toxicity tests for predicting biological impact, Back River, Baltimore Harbor, Maryland. EPA 600/8-86-001. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mount, D. I.; Steen, A. E., and Norberg-King, T. J., eds. Validity of ambient toxicity tests for predicting biological impact, Ohio River, near Wheeling, West Virginia. EPA 600/3-85-071. Environmental

- Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN,
- Mount, D.I. Validity of effluent and ambient toxicity testing for predicting biological impact on Five Mile Creek, Birmingham, Alabama. EPA 600/8-85-015. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mount, D. I.; Thomas, N. A.; Norberg, T. J.; Barbour, M. T.; Roush, T. H., and Brandes, W. F. Effluent and ambient toxicity testing and instream community response on the Ottawa River, Lima, Ohio. EPA 600/3-84-080. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Mount, D. R., T. D. Dawson, and L. P. Burkhard. 1999. Implications of gut purging for tissue residues determined in bioaccumulation testing of sediment with *Lumbriculus variegatus*. *Environ. Toxicol. Chem.* 18:1244-49 #710
- Mount, D. R., D. D. Gulley, J. R. Hockett, T. D. Garrison, and J. M. Evans. 1997. Statistical models to predict the toxicity of major ions to *Ceriodaphnia dubia*, *Daphnia magna* and *Pimephales promelas* (fathead minnows). *Environ. Toxicol. Chem.* 16:2009-19 #658
- Mount, D. R. and J. R. Hockett. 2000. Use of toxicity identification evaluation methods to characterize, identify, and confirm hexavalent chromium toxicity in an industrial effluent. *Water Res.* 34:1379-85 #729
- Mount, D.I. 197? Affadavit of Donald I. Mount, Ph.D. for the Toxic Substances Hearings. Unpublished statement. #197?-11
- Mount, D.I. 1988. Ambient toxicity to assess biological impact. In: *Toxic contaminants and ecosystem health: A Great Lakes focus*. M.S. Evans, ed. Pp. 237-245. John Wiley & Sons, Inc., New York, NY. #1988-40
- Mount, D.I. 1977. An assessment of application factors in aquatic toxicology. In: *Recent advances in fish toxicology: A symposium*. R.A. Tubb, ed. Pp. 183-190. EPA 600/3-77-085. U.S. Environmental Protection Agency, Corvallis, OR. #1977-12
- Mount, D.I. 1976. Biological assessment of effluents. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1976-2
- Mount, D.I. 197? Biotic monitoring. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-12
- Mount, D.I. 1976. Biotic monitoring. In: *Biological monitoring of water and effluent quality*. J. Cairns, Jr., K.L Dickson, and G.F. Westlake, eds. Pp. 20-23. ASTM STP 607. American Society for Testing and Materials, Philadelphia, PA. #1976-7
- Mount, D.I. 1975. Coal/oil shale reference library: Fisheries Bioassay Laboratory. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1975-3
- Mount, D.I. 1967. Considerations for acceptable concentrations of pesticides for fish production. In: *A Symposium on Water Quality Criteria to Protect Aquatic Life*. American Fisheries Society Special Publication No. 4. Pp. 3-6. #1967-3
- Mount, D.I. 1969. Derivation of aquatic life requirements for the temperature characteristic. Presented at the Seventieth Meeting, FWPCA Presentations, Orsanco Engineering Committee, September 10, 1969, Cincinnati, OH. #1969-3
- Mount, D.I. 1968. Developing thermal requirements for freshwater fishes. Presented at Thermal Pollution Symposium, June 4, 1968, Portland, OR. #1968-1
- Mount, D.I. 1970. Ecological considerations in the establishment of standards for thermal discharges. For presentation at ASME Special Symposium on Environmental Effects of Thermal Discharges - the Elements in Work formulating a Rational Public Policy, December 1, 1970, New York, NY. #1970-5
- Mount, D.I. 1975. The effects of heavy metals on fish and aquatic organisms (M. Katz). Discussion. In: *Heavy metals in the aquatic environment*. P.A. Krenkel, ed. Pergamon Press, Oxford. Pp. 31-32. #1975-7
- Mount, D.I. 197? Environmental effects of thermal discharges - ecological elements. Unpublished report. National Water Quality Laboratory, Duluth, MN. #197?-13
- Mount, D.I. 1971. An evaluation of DDT and dieldrin in Lake Michigan drainage basin. Report of the Lake Michigan Enforcement Conference Pesticide Committee. #1971-4
- Mount, D.I. 1970. Heavy metal contamination in north central United States. A report of Ad Hoc Committee on Heavy Metal Contamination in Surface Waters to the North Central Division of the

- American Fisheries Society. #1970-6
- Mount, D.I. 1968. Implication for aquatic life of heated discharges. Statement before the Senate Subcommittee on February 13, 1968. #1968-2
- Mount, D.I. 1981. Margins of safety for aquatic communities. In: *Aquatic toxicology and hazard assessment: Fourth conference*. D.R. Branson and K.L. Dickson, eds. Pp. 5-9. ASTM STP 737. American Society for Testing and Materials, Philadelphia, PA. #1981-20
- Mount, D.I. 1971. Organism response - The reference point for all environmental chemistry (Bioassay techniques in environmental chemistry). Presented before the American Chemical Society, Washington, D.C. #1971-5
- Mount, D.I. 1977. Present approaches to toxicity testing - a perspective. In: *Aquatic toxicology and hazard evaluation*. F.L. Mayer and J.L. Hamelink, eds. Pp. 5-14. ASTM STP 634. American Society for Testing and Materials, Philadelphia, PA. #1977-7
- Mount, D.I. 1971. Progress report of Lake Michigan Interstate Pesticide Committee. Unpublished report. #1971-6
- Mount, D.I. 1969. Research on temperature effects on fishes. For presentation at Sanitary and Water Resources Engineering Conference, June 5-6, 1969, Nashville, TN. #1969-4
- Mount, D.I. 197? Research to develop heavy metal standards for fresh water. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-14
- Mount, D.I. 1975. Research to develop heavy metal standards for fresh water. In: *International Conference on Heavy Metals in the Environment*, October 27-31, 1975, Toronto, Ontario. Pp. 151-161. #1975-12
- Mount, D.I. 197? The role of bioassay as in environmental research. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-15
- Mount, D.I. 1973. Significance of synthetic organics to aquatic animals. Prepared for Fifteenth Water Quality Conference, University of Illinois, Urbana, IL. #1973-11
- Mount, D.I. 19?? Some effects of metals and detergents on fishes. Unpublished paper. Robert A. Taft Sanitary Engineering Center, Public Health Service, U.S. Department of Health, Education, and Welfare, Cincinnati, OH. #19??-2
- Mount, D.I. 1962. Some effects of metals and detergents on fishes. Presented at Air and Water Pollution Conference, November 1962, Columbia, MO. #1962-1
- Mount, D.I. 1959. Spawning behavior of the bluebreast darter. Copeia 3:240-243. #1959-1
- Mount, D.I. 1973. Statement on Minnesota water quality standards for the March 14th hearing at Duluth. Unpublished statement. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-12
- Mount, D.I. 1969. The status of current research at the Federal level on water quality. Presented at the Water Pollution Control Federation Conference, October 8, 1969, Dallas, TX. #1969-5
- Mount, D.I. 1970. Summary of effects of tailings on Lake Superior. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1970-7
- Mount, D.I. 1973. A summary of the studies regarding the effect of The Reserve Mining Company discharge on Lake Superior. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-13
- Mount, D.I. 1970. Technical statement to be given at Michigan State Water Quality Hearings, March 19, 1970. National Water Quality Laboratory, Federal Pollution Control Administration, U.S. Department of the Interior, Duluth, MN. #1970-12
- Mount, D.I. 1980. Tentative guidelines for flow-through early life stage toxicity tests with fathead minnows for use in the U.S. EPA, OTS-ORD round robin test. In: *Proceedings of the Seminar on Biological Monitoring and its Use in the NPDES Permit Program*, October 2, 1979, Chicago, IL. EPA 600/9-80-026. Center for Environmental Research Information, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH. Pp. 62-68. #1980-8
- Mount, D.I. 1974. Testimony on mixing zones in Lake Michigan. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1974-7
- Mount, D.I. 1970. Thermal effects of power plants on ecology. Presented at a Student Conference on Nuclear Power and the Environment, April 3-4, 1970, University of Wisconsin, Madison, WI. #1970-8
- Mount, D.I. 1971. Thermal requirements for Lake Michigan. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1971-7

- Mount, D.I. 1970. Thermal standards in the United States. Presented at the Symposium on Environmental Aspects of Nuclear Power Stations, August 10-14, 1970, New York, NY. #1970-13
- Mount, D.I. 197? The toxicity of heavy metals to aquatic life. *The Naturalist*: pp. 16-19. #197?-16
- Mount, D.I. 1970. Water quality criteria for a cleaner environment. Presented at Ohio State University, November 17, 1979. #1970-9
- Mount, D.I. 197? Water-related research needs in northeast Minnesota. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-17
- Mount, D.I., E. Durhan, and G. Peterson. 1989. The Buckman Street POTW. NETAC Technical Report 01-89. National Effluent Toxicity Assessment Center, Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-53
- Mount, D.I. and G.J. Putnicki. 1966. Summary report of 1963 Mississippi fish kill. *Trans. N. Am. Wildl. Nat. Resour. Conf.* 31:177-184. #1966-3
- Mount, D.I. and G.J. Putnicki. 1966. Summary report of the 1963 Mississippi River fish kill investigation. Presented March 14, 1966 at the 31st N. Amer. Wildlife and Nat. Res. Conf., Pittsburgh, PA. #1966-2
- Mount, D.I. and R.E. Warner. 1965. A serial-dilution apparatus for continuous delivery of various concentrations of materials in water. Division of Water Supply and Pollution Control, Public Health Service, U.S. Department of Health, Education, and Welfare. #1965-1
- Mount, D.I. and R.E. Warner. 1965. A serial-dilution apparatus for continuous delivery of various concentrations of materials in water. Public Health Service Publication No. 999-WP-23. 16 pp. U.S. Department of Health, Education and Welfare Division of Water Supply and Pollution Control, Cincinnati, OH. #1965-2
- Mount, D.R., G.T. Ankley, K.V. Brix, W.H. Clements, D.G. Dixon, A. Fairbrother, C.W. Hickey, R.P. Lanno, C.M. Lee, W.R. Munns, R.K. Ringer, J.P. Staveley, c.m. Wood, R.J. Erickson, and P.V. Hodson. 2003. Effects assessment. In: *Reevaluation of the State of the Science for Water-Quality Criteria*. Reilley, M.C., Stubblefield, W.A., Adams, W.J. et al., eds. pp. 53-118. SETAC, Pensacola, FL. #2003-5
- Mulholland, R. J. New sampling theory for measuring ecosystem structure. EPA 600/3-78/104. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens, GA and Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R805564. Project officer: J. Hill
- Mulin, M.D., C.M. Pochini, S. McCrindle, M. Romkes, S.H. Safe, and L.M. Safe. 1984. High-resolution PCB analysis: Synthesis and chromatographic properties of all 209 PCB congeners. *Environ. Sci. Technol.* 18:468-476. #1984-5
- Mullin, M.D., C.M. Pochini, S. Safe, and L.M. Safe. 1983. Analysis of PCBs using specific isomer high resolution capillary gas chromatography. In: *PCBs: Human and environmental hazards*. F.M. D'Itri and M.A. Kamrin, eds. Butterworth Publishers, Boston, MA. Pp. 165-176. #1983-7
- Munson, B. H., J. H. McCormick, and H. L. Collins. 1980. Influence of thermal challenge on conditioned feeding forays of juvenile rainbow trout. *Trans. Am. Fish. Soc.* 109:116-21 #208
- Murphy, T. J., M. D. Mullin, and J. A. Meyer. 1987. Equilibration of polychlorinated biphenyls and toxaphene with air and water. *Environ. Sci. Technol.* 21:155-62 #354
- Murphy, T.J., G. Paolucci, A. Schinsky, M.L. Combs, and J. Pokojowczyk. 1982? Inputs of PCBs from the atmosphere to Lakes Huron and Michigan. Unpublished report. Large Lakes Research Station, Environmental Research Laboratory-Duluth, Grosse Isle, MI. #1982?-23
- Murphy, T.J., A. Schinsky, G. Paolucci, and C.P. Rzeszutko. 1981. Inputs of polychlorinated biphenyls from the atmosphere to Lakes Huron and Michigan. In: *Atmospheric Pollutants in Natural Waters*, Eisenreich, S.J., ed. pp. 445-458. Ann Arbor Science Publishers, Ann Arbor, MI. #1981-21
- Murphy, T.J. and A.W. Schinsky. 1983. Net atmospheric inputs of PCBs to the ice cover on Lake Huron. *J. Great Lakes Res.* 9(1):92-96. #1983-15
- Murphy, T. J. and Doskey, P. V. Inputs of phosphorus from precipitation to Lake Michigan. EPA 600/3-75-005. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # 802647. Project officer: M.D. Mullin
- Murphy, T. J. and Rzeszutko, C. P. Polychlorinated biphenyls in precipitation in the Lake Michigan basin.

EPA 600/3-78/071. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # 803915. Project officer: M.D. Mullin Mylchreest, E., S. Snajdr, J. J. Korte, and G. T. Ankley. 2003. Comparison of ELISAs for detecting vitellogenin in the fathead minnow (*Pimephales promelas*). *Comp. Biochem. Physiol. Part C.* 134:251-57 #785

N

- Naiman, R.J., H. Décamps, J. Pastor, and C.A. Johnston. 1988. The potential importance of boundaries to fluvial ecosystems. *J. N. Am. Benthol. Soc.* 7(4):289-306. #1988-59
- Naiman, R.J., C.A. Johnston, and J.C. Kelley. 1988. Alteration of North American streams by beaver. *Bioscience* 38(11):753-762. #1988-50
- Nalepa, T. F., D. J. Hartson, D. L. Fanslow, G. A. Lang, and S. J. Lozano. 1998. Declines in benthic macroinvertebrate populations in southern Lake Michigan, 1980-1993. *Can. J. Fish. Aquat. Sci.* 55:2402-13 #699
- Nalepa, T.F., D.J. Hartson, J. Buchanan, J.F. Cavaletto, G.A. Lang, and S.J. Lozano. 2000. Spatial variation in density, mean size and physiological condition of the holarctic amphipod *Ciporeia* spp. in Lake Michigan. *Freshwater Biology*, 43:107-119. #2000-9
- National Dioxin Study: Analytical procedures and quality assurance plan for the analysis of 2,3,7,8-TCDD in Tier 3-7 samples of the U.S. Environmental Protection Agency National Dioxin Study. EPA 600/3-85-019. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- National Effluent Toxicity Assessment Center. 1988. Permit writers' guide to identification and control of bioconcentratable pollutants in complex effluents. EPA 600/x-88-275. Draft report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-49
- National study of chemical residues in fish. Volume I. EPA 823/R-92-008a. Office of Science and Technology, U.S. Environmental Protection Agency, Washington, D.C.
- National study of chemical residues in fish. Volume II. EPA 823/R-92-008b. Office of Science and Technology, U.S. Environmental Protection Agency, Washington, D.C.
- National Water Quality Laboratory. 1970. Effects of taconite on Lake Superior. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1970-10
- National Water Quality Laboratory. 1973. Extramural research - interagency agreements, contracts, and grants, June 30, 1973. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-14
- National Water Quality Laboratory. 1969. Presentation prepared by the staff of the National Water Quality Laboratory for the Joint Commission on Atomic Energy, November 5, 1969. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1969-6
- Natusch, D. F. S. and Taylor, D. R. Environmental effects of western coal combustion. Part IV - Chemical and physical characteristics of coal fly ash. EPA 600/3-80/094. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Notes: Project officer: D.I. Mount
- Nebeker, A. V.; Puglisi, F. A., and DeFoe, D. L. Toxicity of polychlorinated biphenyls (PCBs) to fish and other aquatic life : final report. EPA 600/3-77/034. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Nebeker, A. V. 1971. Effect of high winter water temperatures on adult emergence of aquatic insects. *Water Res.* 5:777-83 #58
- Nebeker, A. V. 1972. Effect of low oxygen concentration on survival and emergence of aquatic insects. *Trans. Am. Fish. Soc.* 101:675-79 #72
- Nebeker, A. V. 1971. Effect of temperature at different altitudes on the emergence of aquatic insects from a single stream. *J. Kans. Entomol. Soc.* 44:26-35 #59
- Nebeker, A. V. 1971. Effect of water temperature on nymphal feeding rate, emergence, and adult longevity of the stonefly *Pteronarcys dorsata*. *J. Kans. Entomol. Soc.* 44:21-26 #60
- Nebeker, A. V. 1976. Survival of *Daphnia*, crayfish, and stoneflies in air-supersaturated water. *J. Fish. Res. Board Can.* 33:1208-12 #137
- Nebeker, A. V. 1973. Temperature requirements and life cycle of the midge *Tanytarsus dissimilis* (Diptera: Chironomidae). *J. Kans. Entomol. Soc.* 46:160-165 #94
- Nebeker, A. V. and A. E. Lemke. 1968. Preliminary studies on the tolerance of aquatic insects to heated

- waters. *J. Kans. Entomol. Soc.* 41:413-18 #20
- Nebeker, A. V. and F. A. Puglisi. 1974. Effect of polychlorinated biphenyls (PCB's) on survival and reproduction of *Daphnia*, *Gammarus*, and *Tanytarsus*. *Trans. Am. Fish. Soc.* 103:722-28 #110
- Nebeker, A. V., F. A. Puglisi, and D. L. DeFoe. 1974. Effect of polychlorinated biphenyl compounds on survival and reproduction of the fathead minnow and flagfish. *Trans. Am. Fish. Soc.* 103:562-68 #111
- Nebeker, A.V. 197? Statement of Alan V. Nebeker (PCB studies with citations list). Unpublished statement. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-3
- Nebeker, A.V. 1976. Summary of recent information regarding effects of PCB's on freshwater organisms. PCB Conference, Chicago, IL, Nov. 1975. #1976-13
- Nebeker, A.V. and A.R. Gaufin. 1964. Bioassays to determine pesticide toxicity to the amphipod crustacean, *Gammarus lacustris*. *Utah Academy Proceedings*, vol. 41, part 1, pp. 64-67. #1964-1
- Nebeker, A.V., F.A. Puglisi, and D.L. DeFoe. 1972. Toxicity of polychlorinated biphenyls (PCBs) to fish and other aquatic life. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1972-4
- Neiheisel, T. W.; Horning, W. B.; Petrasek, A. C., Jr.; Asberry, V. R.; Jones, D. A.; Marcum, R. L., and Hall, C. T. Effects on toxicity of volatile priority pollutants added to a conventional wastewater treatment system. EPA 600/3-83-083. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB83-259721).
- Nelson, H.; Benoit, D.; Erickson, R.; Mattson, V., and Lindberg, J. The effects of variable hardness, pH, alkalinity, suspended clay, and humics on the chemical speciation and aquatic toxicity of copper. EPA 600/3-86-023. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Nelson, H., D. Benoit, R. Erickson, V. Mattson, and J. Lindberg. 1985. The effects of variable hardness, pH, alkalinity, suspended clay, and humics on the chemical speciation and aquatic toxicity of copper. EPA 600/3-86-023. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1985-28
- Nelson, W.R., R.E. Siefert, and D.V. Swedberg. 1968. Studies of the early life history of reservoir fishes. In: *Reservoir Fishery Resources Symposium*, April 5-7, 1967, Athens, GA. American Fisheries Society, Washington, D.C. Pp. 374-385. #1968-4
- Nendza, M. and C. L. Russom. 1991. QSAR modelling of the ERL-D fathead minnow acute toxicity database. *Xenobiotica*. 21:147-70 #456
- Nestrud, L. B. and R. L. Anderson. 1994. Aquatic safety of *Lagenidium giganteum*: Effects on freshwater fish and invertebrates. *J. Invertebr. Pathol.* 64:228-33 #547
- Neuhold, J.M. 1987. The relationship of life history attributes to toxicant tolerance in fishes. *Environmental Toxicology and Chemistry* 6:709-716. #1987-30
- Neuhold, J.M. 1986. Selected life history attributes of some North American endemic and introduced species of fishes. EPA 600/3-86-020. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1986-24
- Neuhold, J. M. Selected life history attributes of some North American endemic and introduced species of fishes. EPA 600/3-86-020. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB86-175726): CR 811646.
- Newman, R.M. and J.A. Perry. 1989. The combined effects of chlorine and ammonia on litter breakdown in outdoor experimental streams. *Hydrobiologia* 184:69-78. #1989-7
- Newman, R.M., J.A. Perry, E. Tam, and R.L. Crawford. 1987. Effects of chronic chlorine exposure on litter processing in outdoor experimental streams. *Freshwater Biology* 18:415-428. #1987-25
- Newsome, L. D., D. E. Johnson, R. L. Lipnick, S. J. Broderius, and C. L. Russom. 1991. A QSAR study of the toxicity of amines to the fathead minnow. *Sci. Total Environ.* 109/110:537-51 #657
- Newsted, J. L., J. P. Giesy, G. T. Ankley, D. E. Tillitt, R. A. Crawford, J. W. Gooch, P. D. Jones, and M. S. Denison. 1995. Development of toxic equivalency factors for PCB congeners and the assessment of TCDD and PCB mixtures in rainbow trout. *Environ. Toxicol. Chem.* 14:861-71 #577
- Nichols, J., S. Bradbury, and J. Swartout. 1999. Derivation of wildlife values for mercury. *J. Toxicol. Environ. Health, Part B*. 2:325-55 #720

- Nichols, J. W. 2001. Use of indicators in ecological risk assessments for persistent, bioaccumulative toxicants. *Hum. Ecol. Risk Assess.* 7:1043-57 #763
- Nichols, J. W., P. N. Fitzsimmons, and F. W. Whiteman. 2004. A physiologically based toxicokinetic model for dietary uptake of hydrophobic organic compounds by fish. II. Simulation of chronic exposure scenarios. *Toxicological Sciences*. 77:219-29 #812
- Nichols, J. W., P. N. Fitzsimmons, F. W. Whiteman, T. D. Dawson, L. Babeu, and J. L. Juenemann. 2004. A physiologically based toxicokinetic model for dietary uptake of hydrophobic organic compounds by fish. I. Feeding studies with 2,2',5,5'-tetrachlorobiphenyl. *Toxicological Sciences*. 77:206-18 #811
- Nichols, J. W., P. N. Fitzsimmons, F. W. Whiteman, D. W. Kuehl, B. C. Butterworth, and C. T. Jenson. 2001. Dietary uptake kinetics of 2,2',5,5'-tetrachlorobiphenyl in rainbow trout. *Drug Metabolism and Disposition*. 29:1013-22 #761
- Nichols, J. W., K. M. Jensen, J. E. Tietge, and R. D. Johnson. 1998. Physiologically based toxicokinetic model for maternal transfer of 2,3,7,8-tetrachlorodibenzo-p-dioxin in brook trout (*Salvelinus fontinalis*). *Environ. Toxicol. Chem.* 17:2422-34 #689
- Nichols, J. W., C. P. Larsen, M. E. McDonald, G. J. Niemi, and G. T. Ankley. 1995. Bioenergetics-based model for accumulation of polychlorinated biphenyls by nestling tree swallows, *Tachycineta bicolor*. *Environ. Sci. & Technol.* 29:604-12 #578
- Nichols, J. W., J. M. McKim, M. E. Andersen, M. L. Gargas, H. J. Clewell III, and R. J. Erickson. 1990. A physiologically based toxicokinetic model for the uptake and disposition of waterborne organic chemicals in fish. *Toxicol. Appl. Pharmacol.* 106:433-47 #424
- Nichols, J. W., J. M. McKim, G. J. Lien, A. D. Hoffman, and S. L. Bertelsen. 1991. Physiologically based toxicokinetic modeling of three waterborne chloroethanes in rainbow trout (*Oncorhynchus mykiss*). *Toxicol. Appl. Pharmacol.* 110:374-89 #457
- Nichols, J. W., J. M. McKim, G. J. Lien, A. D. Hoffman, S. L. Bertelsen, and C. M. Elonen. 1996. A physiologically based toxicokinetic model for dermal absorption of organic chemicals by fish. *Fundam. Appl. Toxicol.* 31:229-42 #625
- Nichols, J. W., J. M. McKim, G. J. Lien, A. D. Hoffman, S. L. Bertelsen, and C. A. Gallinat. 1993. Physiologically-based toxicokinetic modeling of three waterborne chloroethanes in channel catfish, *Ictalurus punctatus*. *Aquat. Toxicol.* 27:83-112 #509
- Nichols, J. W., P. Rheingans, D. B. Lothenbach, R. McGeachie, L. Skow, and J. M. McKim. 1994. Three-dimensional visualization of physiologically based kinetic model outputs. *Environ. Health Perspect.* 102:952-56 #548
- Nichols, J. W. and L. J. Weber. 1989. Comparative oxygen affinity of fish and mammalian myoglobins. *J. Comp. Physiol.* 159B:205-9 #395
- Nichols, J. W. and L. J. Weber. 1990. Lack of myoglobin function in the isolated perfused buffalo sculpin (*Enophrys bison*) heart. *Can. J. Zool.* 68:825-29 #425
- Nichols, J. W. and L. J. Weber. 1989. Oxidation of cardiac myoglobin in vivo by sodium nitrite or hydroxylamine. *Arch. Toxicol.* 63:484-88 #396
- Nichols, J.W. 2002. Modeling the uptake and disposition of hydrophobic organic chemicals in fish using a physiologically based approach. In: *The Practical Applicability of Toxicokinetic Models in the Risk Assessment of Chemicals*, Krüse, J., Verhaar, H.J.M. and de Raat, W.K., eds. pp. 109-133. Kluwer Academic Publishers, The Netherlands. #2002-8
- Nichols, J.W. 1999. Recent advances in the development and use of physiologically based toxicokinetic models for fish. In: *Xenobiotics in Fish*. Smith et al, eds. Pp. 87-103. Kluwer Academic/Plenum Publishers, New York, NY. #1999-5
- Nichols, J.W., etal. 1997. Mercury study report to Congress. Volume VI: an ecological assessment for anthropogenic mercury emissions in the United States. EPA-452/R-97-008. Office of Air Quality Planning & Standards/Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C. #1997-11
- Niemi, G. J., S. C. Basak, G. D. Veith, and G. Grunwald. 1992. Prediction of octanol/water partition coefficient (K_{ow}) with algorithmically derived variables. *Environ. Toxicol. Chem.* 11:893-900 #485
- Niemi, G. J., T. E. Davis, G. D. Veith, and B. Vieux. 1986. Organochlorine chemical residues in herring gulls, ring-billed gulls, and common terns of western Lake Superior. *Arch. Environ. Contam. Toxicol.* 15:313-20 #328
- Niemi, G. J., P. W. DeVore, N. E. Detenbeck, D. K. Taylor, A. R. Lima, J. Pastor, J. D. Yount, and R. J.

- Naiman. 1990. Overview of case studies on recovery of aquatic systems from disturbance. *Environ. Manage.* 14:571-87 #426
- Niemi, G. J., G. D. Veith, R. R. Regal, and D. D. Vaishnav. 1987. Structural features associated with degradable and persistent chemicals. *Environ. Toxicol. Chem.* 6:515-27 #355
- Niemi, G.J., S.C. Basak, and G.D. Veith. 1989. A theoretical and computational approach to chemical evaluation based on structure-activity relationships. In: *Envirotech Vienna 1989*. Session 1: Evaluation of hazardous substances and products. K.L Zirm and J. Mayer, eds. Pp. 57-68. Umweltbundesamt, Federal Environmental Agency, Vienna, Austria. #1989-39
- Niemi, G.J., S.P. Bradbury, and J.M. McKim. 1991. The use of fish physiology literature for predicting fish acute toxicity syndromes. In: *Aquatic toxicology and risk assessment, 14th vol.* M.A. Mayes and M.G. Barron, eds. Pp. 245-260. ASTM STP 1124. American Society for Testing and Materials, Philadelphia, PA. #1991-21
- Niemi, G.J., N.E. Detenbeck, and J.A. Perry. 1993. Comparative analysis of variables to measure recovery rates in streams. *Environ. Toxicol. Chem.*, vol. 12, pp. 1541-1547. #1993-28
- Niemi, G.J. and J.M. McKim. 1988. Simplifying complex QSARs in toxicity studies with multivariate statistics. In: *Proceedings of the Third International Workshop on Quantitative Structure-Activity Relationships in Environmental Toxicology*, May 22-26, 1988, Knoxville, TN. CONF-880520. Pp. 11-19. #1988-3
- Niemi, G.J., R.J. Naiman, and J. Pastor. 1988. Factors controlling the recovery of aquatic systems from disturbance. Natural Resources Research Institute--University of Minnesota, Duluth and Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-64
- Niemi, G.J., R.R. Regal, D.D. Vaishnav, and G.D. Veith. 1985. A preliminary model to predict biodegradability from chemical structure. In: *Proceedings of the workshop on Biodegradation Kinetics*, October 18-20, 1983, Navarre Beach, FL. EPA 600/9-85-018. Environmental Research Laboratory, U.S. Environmental Protection Agency, Gulf Breeze, FL. Pp. 121-126. #1985-9
- Niemi, G.J., R.R. Regal, and G.D. Veith. 1985. Applications of molecular connectivity indexes and multivariate analysis in environmental chemistry. In: *Environmental applications of chemometrics*. ACS Symposium Series 292. J.J. Breen and P.E. Robinson, eds. Pp. 148-159. American Chemical Society, Washington, D.C. #1985-24
- Niemi, G.J. and G.D. Veith. 1989. An approach for development of structure-biodegradation relationships of organic chemicals. In: *Aquatic toxicology and environmental fate, 11th vol.* G.W. Suter, II and M.A. Lewis, eds. Pp. 459-467. ASTM STP 1007. American Society for Testing and Materials, Philadelphia, PA. #1989-31
- Norberg, T.J. and D.I. Mount. 1985. Diets for *Ceriodaphnia reticulata* life-cycle tests. In: *Aquatic toxicology and hazard assessment: Seventh symposium*. R.D. Cardwell, R. Purdy, R.C. Bahner, eds. Pp. 42-52. ASTM STP 854. American Society for Testing and Materials, Philadelphia, PA. #1985-19
- Norberg, T. J. and D. I. Mount. 1985. A new fathead minnow (*Pimephales promelas*) subchronic toxicity test. *Environ. Toxicol. Chem.* 4:711-18 #300
- Norberg-King, T. J. 1989. An evaluation of the fathead minnow seven-day subchronic test for estimating chronic toxicity. *Environ. Toxicol. Chem.* 8:1075-89 #397
- Norberg-King, T. J. 1990. Letter to the editor: Seven-day tests and chronic tests. *Environ. Toxicol. Chem.* 9:1435-36 #427
- Norberg-King, T. J., E. J. Durhan, G. T. Ankley, and E. D. Robert. 1991. Application of toxicity identification evaluation procedures to the ambient waters of the Colusa Basin Drain, California. *Environ. Toxicol. Chem.* 10:891-900 #458
- Norberg-King, T. J. and S. Schmidt. 1993. Comparison of effluent toxicity results using *Ceriodaphnia dubia* cultured on several diets. *Environ. Toxicol. Chem.* 12:1945-55 #510
- Norberg-King, T.J. 1993. A linear interpolation method for sublethal toxicity: The inhibition concentration (IC_p) approach. Version 2.0. National Effluent Toxicity Assessment Center Technical Report 03-93. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1993-21
- Norberg-King, T.J. 1979. Rapid methods research highlights. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1979-2
- Norberg-King, T.J., M. Lukasewycz, and J. Jenson. 1989. Results of diazinon levels in POTW effluents in

- the United States. NETAC Technical Report 14-89. National Effluent Toxicity Assessment Center, Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-54
- Norberg-King, T.J., D.I. Mount, J.R. Amato, and J.E. Taraldsen. 1988. Application of the water quality based approach on a regional scale: Toxicity testing and identification of toxicants in effluents from the San Francisco Bay region. EPA 600/x-88-237. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-46
- Norberg-King, T. J. and Mount, D. I. Validity of effluent and ambient toxicity tests for predicting biological impact, Skeleton Creek, Enid, Oklahoma. EPA 600/8-86-002. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Norberg-King, T. J.; Mount, D. I.; Amato, J. R.; Jensen, D. A., and Thompson, J. A. Toxicity identification evaluation: Characterization of chronically toxic effluents, phase I . EPA 600/6-91/005. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Norberg-King, T. J. Toxicity identification evaluation: characterization of chronically toxic effluents, phase I . EPA 600/6-91/005F. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Norberg-King, T. J.; Mount, D. I.; Durhan, E. J.; Ankley, G. T.; Burkhard, L. P.; Amato, J. R.; Lukasewycz, M. T.; Schubauer-Berigan, M. K., and Anderson-Carnahan, L., eds. Methods for aquatic toxicity identification evaluations: Phase I toxicity characterization procedures (Second edition). EPA 600/6-91-003. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Norberg-King, T. J. Understanding and accounting for method variability in whole effluent toxicity applications under the national pollutant discharge elimination system program. EPA 833/R-00/003. Office of Wastewater Management, Office of Water, U.S. Environmental Protection Agency, Washington, DC.
- Nordlie, K. J. and J. W. Arthur. 1981. Effect of elevated water temperature on insect emergence in outdoor experimental channels. *Environ. Pollut. Ser. A*. 25:53-65 #225
- O
- O'Halloran, S. L., K. Liber, J. A. Gangl, and M. L. Knuth. 1999. Effects of repeated exposure to 4-nonylphenol on the zooplankton community in littoral enclosures. *Environ. Toxicol. Chem.* 18:376-85 #702
- O'Halloran, S.L., K. Liber, K.L. Schmude, and T.D. Corry. 1996. Effects of diflubenzuron on benthic macroinvertebrates in littoral enclosures. *Arch. Environ. Contam. Toxicol.*; 30:444-451 . #1996-13
- Olson, D. L. and G. M. Christensen. 1982. Effect of selected environmental pollutants and other chemicals on the activity of urease (*in vitro*). *Bull. Environ. Contam. Toxicol.* 28:439-45 #248
- Olson, D. L. and G. M. Christensen. 1980. Effects of water pollutants and other chemicals on fish acetylcholinesterase (*in vitro*). *Environ. Res.* 21:327-35 #209
- Olson, D. L. 1974. Fathead minnow egg production as a function of the number of females per spawning chamber. Interim report of the fathead minnow methods study, part I. U.S. Environmental Protection Agency, Duluth, MN. #1974-15
- Olson, G. F., D. I. Mount, V. M. Snarski, and T. W. Thorslund. 1975. Mercury residues in fathead minnows, *Pimephales promelas* Rafinesque, chronically exposed to methylmercury in water. *Bull. Environ. Contam. Toxicol.* 14:129-34 #121
- Olson, G.F. 1971. Procedure for ultra trace analysis of mercury (including organic) in natural water. Unpublished report. #1971-10
- Olson, G.F. 197? Statement of Gayle Olson (mercury bioassay). Unpublished statement. #197?-18
- Oris, J.T. and J.A. Bailer. 1993. Statistical analysis of the *Ceriodaphnia* toxicity test: Sample size determination for reproductive effects. *Environmental Toxicology and Chemistry* 12:85-90. #1993-4
- Oris, J.T., R.W. Winner, and M.V. Moore. 1991. A four-day survival and reproduction toxicity test for *Ceriodaphnia dubia*. *Environmental Toxicology and Chemistry* 10:217-224. #1991-14
- P
- Palekar, L. D., P. M. Cook, and D. L. Coffin. 1983. *In vitro* effects of mineral fibers. *Environ. Health*

- Palmeira, C. M., J. Serrano, D. W. Kuehl, and K. B. Wallace. 1997. Preferential oxidation of cardiac mitochondrial DNA following acute intoxication with doxorubicin. *Biochim. Biophys. Acta.* 1321:101-6 #660
- Parkhurst, B.R. and D.I. Mount. 1991. Water quality-based approach to toxics control: Narrowing the gap between science and regulation. *Water Environment & Technology* December 1991:45-47. #1991-5
- Parkhurst, M.A., G. Whelan, Y. Onishi, and A.R. Olsen. 1981. Simulation of the migration, fate, and effects of diazinon in two Monticello stream channels. Prepared for the U.S. Army Medical Bioengineering Laboratory, Fort Detrick, Frederick, MD by Battelle, Pacific Northwest Laboratories, Richland, WA. #1981-2
- Parkinson, A., L.W. Robertson, L. Safe, and Safe S. 1981. Polychlorinated biphenyls as inducers of hepatic microsomal enzymes: Effects of di-ortho *i* substitution. *Chem.-Biol. Interactions* 35:1-12. #1981-4
- Parkinson, A., L.W. Robertson, and S. Safe. 1980. Reconstituted human breast milk PCBs as potent inducers of aryl hydrocarbon hydroxylase. *Biochemical and Biophysical Research Communications*: 96(2):882-889. #1980-5
- Parks, L.G., C.S. Lambright, E.F. Orlando, L.J. Guillette, Jr., G.T. Ankley, and L.E. Gray, Jr. 2001. Masculinization of female mosquitofish in kraft mill effluent-contaminated Fenolloway River water is associated with androgen receptor agonist activity. *Toxicol. Sci.*, 62:257-267. #2001-8
- Parrish, P.R., K.L. Dickson, J.L. Hamelink, R.A. Kimerle, K.J. Macek, F.L. Mayer, Jr., and D.I. Mount. 1988. Aquatic toxicology: Ten years in review and a look at the future. In: *Aquatic toxicology and hazard assessment, 10th vol.* W.J. Adams, G.A. Chapman, and W.G. Landis, eds. Pp. 7-25. ASTM STP 971. American Society for Testing and Materials, Philadelphia, PA. #1988-36
- Patterson, R.L. 197? Production, mortality, and power plant cooling water entrainment of larval yellow perch in Michigan-Ohio waters of the western basin of Lake Erie in 1975 and 1976: Impacts upon standing crop and the fishery. Unpublished report. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #197?-25
- Patterson, R.L. 1987. Revised estimates of power plant entrainment of ichthyoplankton in western Lake Erie in 1975-77. *J. Great Lakes Res.* 13(1):78-83. #1987-23
- Patterson, R.L. and Z.Q. Ma. 1988. Sensitivity analyses of parameters of a M(t)/G/oo stochastic service system. *Applied Mathematics and Computation* 26:169-177. #1988-11
- Patterson, R. L. and School of Natural Resources. Production, mortality, and power plant entrainment of larval yellow perch in western Lake Erie. EPA 600/3-79/087. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Paul, J. F.; Richardson, W. L.; Gorstko, A. B., and Matveyev, A. A. Results of a joint U.S.A./U.S.S.R. hydrodynamic and transport modeling project. EPA 600/3-79/015. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- PCB newsletter. Unpublished newsletter. 1973. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1973-22
- Pearlman, R.S. 1986. Molecular surface area and volume: Their calculations and use in predicting solubilities and free energies of desolvation. In: *Partition coefficient determination and estimation*. Dunn, William J., III, John H. Block, and Robert S. Pearlman, eds. Pergamon Press, New York, NY. Pp. 3-20. #1986-28
- Penkal, R. F. and Gregory, R. W. Smallmouth bass and largemouth bass in the Tongue River Reservoir, Montana, 1975-76. EPA 600/3-80/045. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (Environmental effects of western coal surface mining, Part VI): Grant # R803950. Project officer: D.I. Mount
- Peterka, J. J. and Kent, J. S. Dissolved oxygen, temperature, survival of young at fish spawning sites. EPA 600/3-76/113. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R801976. Project officer: R. Siefert
- Perry, J.A. and N.H. Troelstrup, Jr. 1988. Whole ecosystem manipulation: A productive avenue for test system research? *Environ. Toxicol. Chem.* 7(11):941-951. #1988-41
- Perry, J.A., N.H. Troelstrup, Jr., M. Newsom, and B. Shelley. 1987. Whole ecosystem manipulation

- experiments: the search for generality. *Wat. Sci. Tech.* 19(11):55-71. #1987-48
- Peterka, J. J. and Kent, J. S. Dissolved oxygen, temperature, survival of young at fish spawning sites. EPA 600/3-76/113. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R801976. Project officer: R. Siebert
- Peterson, G. S., G. T. Ankley, and E. N. Leonard. 1996. Effect of bioturbation on metal-sulfide oxidation in surficial freshwater sediments. *Environ. Toxicol. Chem.* 15:2147-55 #626
- Peterson, G. S., L. B. Johnson, R. P. Axler, and S. A. Diamond. 2002. Assessment of the risk of solar ultraviolet radiation to amphibians. II. *In situ* characterization of exposure in amphibian habitats. *Environ. Sci. Technol.* 36:2859-65 #775
- Peterson, G.S., R.P. Axler, K.B. Lodge, J.A. Schulte, and J.L. Crane. 2002. Evaluation of a fluorometric screening method for predicting total PAH concentrations in contaminated sediments. *Environ. Monitor. Assess.*, 78:111-129. #2002-6
- Peterson, S. A.; Sanville, W. D.; Stay, F. S., and Powers, C. F. Nutrient inactivation as a lake restoration procedure: Laboratory investigations. EPA 660/3-74-032. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Program Element # 1BA031.
- Phillips, G.R. and R.C. Russo. 1978. Metal bioaccumulation in fishes and aquatic invertebrates: A literature review. EPA 600/3-78-103. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1978-7
- Phipps, G. L., G. T. Ankley, D. A. Benoit, and V. R. Mattson. 1993. Use of the aquatic oligochaete *Lumbricus variegatus* for assessing the toxicity and bioaccumulation of sediment-associated contaminants. *Environ. Toxicol. Chem.* 12:269-79 #511
- Phipps, G. L., M. J. Harden, E. N. Leonard, T. H. Roush, D. L. Spehar, C. E. Stephan, Q. H. Pickering, and A. L. Buikema, Jr. 1984. Effects of pollution on freshwater organisms. *J. Water Pollut. Control Fed.* 56:725-58 #287
- Phipps, G. L. and G. W. Holcombe. 1985. A method for aquatic multiple species toxicant testing: Acute toxicity of 10 chemicals to 5 vertebrates and 2 invertebrates. *Environ. Pollut. Ser. A.* 38:141-57 #301
- Phipps, G. L., G. W. Holcombe, and J. T. Fiandt. 1981. Acute toxicity of phenol and substituted phenols to the fathead minnow. *Bull. Environ. Contam. Toxicol.* 26:585-93 #226
- Phipps, G. L., G. W. Holcombe, and J. T. Fiandt. 1982. Saturator system for generating toxic water solutions for aquatic bioassays. *Prog. Fish-Cult.* 44:115-16 #249
- Phipps, G. L., V. R. Mattson, and G. T. Ankley. 1995. Relative sensitivity of three freshwater benthic macroinvertebrates to ten contaminants. *Arch. Environ. Contam. Toxicol.* 28:281-86 #579
- Phipps, G.L. and G.W. Holcombe. 1988. Report on species/species extrapolations from freshwater organism comparative toxicology data base. EPA 600/x-88-265. Internal report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-44
- Pickering, Q. H. 1980. Chronic toxicity of hexavalent chromium to the fathead minnow (*Pimephales promelas*). *Arch. Environ. Contam. Toxicol.* 9:405-13 #210
- Pickering, Q. H. 1974. Chronic toxicity of nickel to the fathead minnow. *J. Water Pollut. Control Fed.* 46:760-765 #112
- Pickering, Q. H. 1968. Some effects of dissolved oxygen concentrations upon the toxicity of zinc to the bluegill, *Lepomis macrochirus*, Raf. *Water Res.* 2:187-94 #21
- Pickering, Q. H., W. A. Brungs, and M. H. Gast. 1977. Effect of exposure time and copper concentration on reproduction of the fathead minnow (*Pimephales promelas*). *Water Res.* 11:1079-83 #158
- Pickering, Q. H., D. O. Carle, A. Pilli, T. Willingham, and J. M. Lazorchak. 1989. Effects of pollution on freshwater organisms. *J. Water Pollut. Control Fed.* 61:998-1042 #398
- Pickering, Q. H. and M. H. Gast. 1972. Acute and chronic toxicity of cadmium to the fathead minnow (*Pimephales promelas*). *J. Fish. Res. Board Can.* 29:1099-106 #73
- Pickering, Q. H. and W. T. Gilliam. 1982. Toxicity of aldicarb and fonofos to the early-life-stage of the fathead minnow. *Arch. Environ. Contam. Toxicol.* 11:699-702 #250
- Pickering, Q. H. and C. Henderson. 1966. The acute toxicity of some heavy metals to different species of warmwater fishes. *Air Water Pollut. Int. J.* 10:453-63 #7
- Pickering, Q. H. and C. Henderson. 1966. Acute toxicity of some important petrochemicals to fish. *J. Water Pollut. Control Fed.* 38:1419-29 #6
- Pickering, Q. H., E. P. Hunt, G. L. Phipps, T. H. Roush, W. E. Smith, D. L. Spehar, C. E. Stephan, and D.

- K. Tanner. 1983. Effects of pollution on freshwater fish and amphibians. *J. Water Pollut. Control Fed.* 55:840-863 #266
- Pickering, Q. H. and T. O. Thatcher. 1970. The chronic toxicity of linear alkylate sulfonate (LAS) to *Pimephales promelas*, Rafinesque. *J. Water Pollut. Control Fed.* 42:243-54 #46
- Pickering, Q. H. and W. N. Vigor. 1965. The acute toxicity of zinc to eggs and fry of the fathead minnow. *Prog. Fish-Cult.* 27:153-57 #3
- Pickering, Q.H. and C. Henderson. 196? The acute toxicity of some heavy metals to different species of warm water fishes. Proc. 19th Ind. Waste Conf., Purdue University?? #196?-3
- Pickering, Q.H., G.M. Shaul, and K.A. Dostal. 1985. Acute and chronic toxicity to the fathead minnow, *Pimephales promelas*, of effluents from a treatment plant receiving dye and pigment processing wastewater. In: *Aquatic Toxicology and Hazard Assessment: Eighth Symposium*. R.C. Bahner and D.J. Hansen, eds. Pp. 395-406. ASTM STP 891. American Society for Testing and Materials, Philadelphia, PA. #1985-5
- Pignatello, J.J., L.K. Johnson, M.M. Martinson, R.E. Carlson, and R.L. Crawford. 1985. Response of the microflora in outdoor experimental streams to pentachlorophenol: Compartmental contributions. *Applied and Environmental Microbiology* 50(1):127-132. #1985-17
- Pignatello, J.J., M.M. Martinson, J.G. Steiert, R.E. Carlson, and R.L. Crawford. 1983. Biodegradation and photolysis of pentachlorophenol in artificial freshwater streams. *Applied and Environmental Microbiology* 46(5):1024-1031. #1983-10
- Pillard, D.A., D.L. DuFresne, D.D. Caudle, J.E. Tietge, and J.M. Evans. 2000. Predicting the toxicity of major ions in seawater to mysid shrimp (*Mysidopsis bahia*), sheepshead minnow (*Cyprinodon variegatus*), and inland silverside minnow (*Menidia beryllina*). *Environ. Toxicol. Chem.*, 25(1):183-191. #2000-1
- Pillard, D.A., D.L. DuFresne, J.E. Tietge, and J.M. Evans. 1999. Response of mysid shrimp (*Mysidopsis bahia*), sheepshead minnow (*Cyprinodon variegatus*), and inland silverside minnow (*Menidia beryllina*) to changes in artificial seawater salinity. *Environ. Toxicol. Chem.* 18(3):430-435. #1999-3
- Pilli, A., D. O. Carle, E. R. Kline, Q. H. Pickering, and J. M. Lazorchak. 1988. Effects of pollution on freshwater organisms. *J. Water Pollut. Control Fed.* 60:994-1065 #366
- Pirrone, N., I. Allegrini, G.J. Keeler, J.O. Nriagu, R. Rossmann, and J.A. Robbins. 1998. Historical atmospheric mercury emissions and depositions in North America compared to mercury accumulations in sedimentary records. *Atmospheric Environment*, 32(5):929-940. #1998-4
- Podoliak, H.A. and J.H. McCormick. 1966. Absorption of dissolved strontium by brook trout. *Fisheries Research Bulletin Number 30: The nutrition of trout*. Pp. 5-13. Cortland Hatchery Report Number 35, Cortland, NY. #1966-1
- Poff, N.L. and J.D. Allan. 1995. Functional organization of stream fish assemblages in relation to hydrological variability. *Ecology* 76(2):606-627. #1995-4
- Poff, N.L. and J.D. Allan. 199? Streamflow variability, fish community structure, and implications for climatic change. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #199?-2
- Poldoski, J. E. 1979. Cadmium bioaccumulation assays. Their relationship to various ionic equilibria in Lake Superior water. *Environ. Sci. Technol.* 13:701-6 #190
- Poldoski, J. E. 1977. Computer-assisted furnace atomic absorption spectrometric analysis. *Anal. Chem.* 49:891-93 #159
- Poldoski, J. E. 1980. Determination of lead and cadmium in fish and clam tissue by atomic absorption spectrometry with a molybdenum and lanthanum treated pyrolytic graphite atomizer. *Anal. Chem.* 52:1147-51 #211
- Poldoski, J. E. 1977. Molecular spectral interference in the determination of arsenic by furnace atomic absorption. *Atomic Absorp. Newslett.* 16:70-73 #160
- Poldoski, J. E. and G. E. Glass. 1978. Anodic stripping voltammetry at a mercury film electrode: Baseline concentrations of cadmium, lead, and copper in selected natural waters. *Anal. Chim. Acta*. 101:79-88 #179
- Poldoski, J. E., E. N. Leonard, J. T. Fiandt, L. E. Anderson, G. F. Olson, and G. E. Glass. 1978. Factors in the determination of selected trace elements in near-shore U.S. waters of Lakes Superior and Huron. *J. Great Lakes Res.* 4:206-15 #180
- Poldoski, J.E. 1986. Control of cadmium carbonate precipitation interferences during the dialysis of

- cadmium in high bicarbonate alkalinity aquatic-life bioassay waters. EPA Project Summary, EPA 600/S3/86-001. U.S. Environmental Protection Agency, Cincinnati, OH. #1986-31
- Poldoski, J.E. and G.E. Glass. 1977. Considerations of trace element chemistry for streams in the Minnesota-Ontario border area. In: *International Conference on Heavy Metals in the Environment*, October 27-31, 1975, Toronto, Ontario. Pp. 901-922. #1977-10
- Poldoski, J.E. and G.E. Glass. 1976. Methodological considerations in western Lake Superior water-sediment exchange studies of some trace elements. In: *Accuracy in Trace Analysis: Sampling, Sample Handling, and Analysis, Proceedings of the 7th IMR Symposium*, October 7-11, 1974, Gaithersburg, MD. Pp. 1073-1088. NBS Special Publication No. 422, National Bureau of Standards, Washington, D.C. #1976-6
- Poldoski, J.E. and G.E. Glass. 1974. Methodological considerations in western Lake Superior water-sediment exchange studies of some trace elements. Presented at the Seventh Materials Research Symposium, Accuracy in Trace Analysis, National Bureau of Standards, Gaithersburg, MD, October 7-11, 1974. #1974-9
- Pratt, J.R. and N.J. Bowers. 1990. Effect of selenium on microbial communities in laboratory microcosms and outdoor streams. *Toxicity Assessment: An International Journal*, vol. 5, pp. 293-307. #1990-33
- Preud'homme, E.B. and H.G. Stefan. 1992. Errors related to random stream temperature data collection in upper Mississippi River watershed. *Water Resources Bulletin* 28(6):1077-1082. #1992-12
- Preud'homme, E.B. and H.G. Stefan. 1992. Relationship between water temperatures and air temperatures for central U.S. streams. Project Report No. 333, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis, MN. Prepared for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1992-25
- Q
- Que, L., Jr., D.D. Cox, and R.C. Kolanczyk. 1988. Functional models for catechol 1,2-dioxygenase. In: *Studies in Organic Chemistry*, vol. 33, pp. 399-405. #1988-60
- Que, L., Jr., R.C. Kolanczyk, and L.S. White. 1987. Functional models for catechol 1,2-dioxygenase. Structure, reactivity and mechanism. *J. Am. Chem. Soc.* 109:5373-5380. #1987-46
- Quigley, E.; Randall, J.; Murray, B. H., and D'Alessio, A. B. Citizen concern with power plant siting : Wisconsin power plant impact study. EPA 600/3-80/004. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803971. Project officer: G.E. Glass
- R
- Ragland, K.W. and K.E. Wilkening. 1982. Relationship between mesoscale acid precipitation and meteorological factors. In: *Acid precipitation: Effects on ecological systems*. D'Itri, F.M., ed. Ann Arbor Science, Ann Arbor, MI. Pp. 123-139. #1982-12
- Ragland, K. W.; Goodell, B. D., and Coughlin, T. L. Air pollution studies near a coal-fired power plant: Wisconsin Power Plant Impact Study. EPA 600/3-80/048. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803971.
- Raphael, C. N.; Jaworski, E.; Ojala, C. F., and Turner, D. S. Future dredging quantities in the Great Lakes. EPA 660/3-74-029. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant # R-801062. Project officer: M.D. Mullin
- Rapp, G. R., Jr., J. D. Allert, B. W. Liukkonen, J. A. Ilse, O. L. Loucks, and G. E. Glass. 1985. Acid deposition and watershed characteristics in relation to lake chemistry in northeastern Minnesota. *Environ. Int.* 11:425-40 #302
- Rapp, G. R., Jr., B. W. Liukkonen, J. D. Allert, J. A. Sorensen, G. E. Glass, and O. L. Loucks. 1987. Geologic and atmospheric input factors affecting watershed chemistry in Upper Michigan. *Environ. Geol. Water Sci.* 9:155-71 #356
- Rasmussen, A.H., M. Honzo, and H.G. Stefan. 1994. A test of several evaporation equations for water temperature simulations in lakes. External Memorandum No. M-237, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis, MN. Prepared for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1994-14
- Rasmussen, A.H. and H.G. Stefan. 1996. Climate change effects on water temperature and dissolved oxygen in five North Carolina lakes. Environmental Research Laboratory, U.S. Environmental

- Protection Agency, Duluth, MN. #1996-30
- Rathbun, J.E., M.L. Gessner, V.E. Smith, D.L. McGunagle, D.J. Brokaw, and M.A. Hoeft. 1988. Bioaccumulation of total PCBs and selected MFO-inducing PCB congeners by caged mussels, fathead minnows, and channel catfish in the Monroe Harbor, River Raisin, Michigan. Unpublished manuscript. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #1988-43
- Rathbun, J.E., L.L. Huellmantel, M. Tracy, and K. Ahlgren. 1994. Screening-level analyses. In: *Assessment and Remediation of Contaminated Sediments (ARCS) Program -- Assessment Guidance Document*, pp. 57-68. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL. EPA 905/B-94/002. #1994-21
- Rathbun, J.E., L.L. Huellmantel, M. Tracy, V.E. Smith, and K. Ahlgren. 1996. Rapid sediment assessment: indicator analysis and screening analysis approaches. *J. Great Lakes Res.*, 22(3):523-533. #1996-27
- Rathbun, J.E., R.G. Kreis, Jr., E.L. Lancaster, M.J. Mac, and M.J. Zabik. 1988. Pilot confined disposal facility biomonitoring study: Channel/Shelter Island diked facility, Saginaw Bay, Bay City, Michigan, 1987. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-53
- Reinfelder, J. R., N. S. Fisher, S. N. Luoma, J. W. Nichols, and W.-X. Wang. 1998. Trace element trophic transfer in aquatic organisms: a critique of the kinetic model approach. *Sci. Total Environ.* 219:117-35 #687
- Rice, C.P., P.J. Samson, and G. Noguchi. 1984. Atmospheric transport of toxaphene to Lake Michigan: Project summary. EPA 600/S3-84-101. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-6
- Rice, C.P., P.J. Samson, and G.E. Noguchi. 1986. Atmospheric transport of toxaphene to Lake Michigan. *Environmental Science and Technology* 20:1109-1116. #1986-8
- Rice, P. J., C. D. Drewes, T. M. Klubertanz, S. P. Bradbury, and J. R. Coats. 1997. Acute toxicity and behavioral effects of chlorpyrifos, permethrin, phenol, strychnine, and 2,4-dinitrophenol to 30-day-old Japanese medaka (*Oryzias latipes*). *Environ. Toxicol. Chem.* 16:696-704 #670
- Richard, A.M., P. Wagner, R. Purdy, and G.D. Veith. 1995. Testing and screening technologies for review of chemicals in commerce: SAR/modeling. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1995-13
- Richards, C., G. E. Host, and J. W. Arthur. 1993. Identification of predominant environmental factors structuring stream macroinvertebrate communities within a large agricultural catchment. *Freshwater Biol.* 29:285-94 #512
- Richards, C., L. Johnson, and G. Host. 1993. Landscape influences on habitat, water chemistry, and macroinvertebrate assemblages in midwestern stream ecosystems. Final report to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1993-20
- Richardson, W.L. 1975. An evaluation of the transport characteristics of Saginaw Bay using a mathematical model of chloride. Presented at Symposium of Mathematical Modeling of Biochemical Processes in Aquatic Ecosystems, American Chemical Society, April 6-11, 1975, Philadelphia, PA. #1975-5
- Richardson, W.L., D.D. Endicott, R.G. Kreis, Jr., and K.R. Rygwelski. 1999. The Lake Michigan mass balance project : quality assurance plan for mathematical modeling. Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1999-10
- Richter, J. E., S. F. Peterson, and C. F. Kleiner. 1983. Acute and chronic toxicity of some chlorinated benzenes, chlorinated ethanes, and tetrachloroethylene to *Daphnia magna*. *Arch. Environ. Contam. Toxicol.* 12:679-84 #267
- Riedel, B. L. and G. M. Christensen. 1979. Effect of selected water toxicants and other chemicals upon adenosine triphosphatase activity *in vitro*. *Bull. Environ. Contam. Toxicol.* 23:365-68 #191
- Riggs, V. L. and Gregory, R. W. Age and growth of walleyes and saugers in the Tongue River Reservoir, Montana, 1975-77. EPA 600/3-80/038. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (Environmental effects of western coal surface mining, Part V): Grant # R803950. Project officer: D.I. Mount
- Robbins, J. A. Sediments of southern Lake Huron : elemental composition and accumulation rates. EPA 600/3-80/080. Environmental Research Laboratory, Office of Research and Development, U.S.

- Environmental Protection Agency, Duluth, MN, Grant # R803086. Project officer: M.D. Mullin
- Roberts, J., R. Jepsen, D. Gotthard, and W. Lick. 1998. Effects of particle size and bulk density on erosion of quartz particles. *Journal of Hydraulic Engineering*. 124(12):1261-1267. #1998-14
- Robertson, A.; Gehrs, C. W.; Hardin, B. D., and Hunt, G. W. Culturing and ecology of *Diaptomus clavipes* and *Cyclops vernalis*. EPA 660/3-74-006. Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C., Grant # 18050 ELT. Project officer: K. Biesinger
- Robertson, L.W., B. Chittim, S.H. Safe, M.D. Mullin, and C.M. Pochini. 1983. Photodecomposition of a commercial polybrominated biphenyl fire retardant: High-resolution gas chromatographic analysis. *J. Agric. Food Chem.* 31(2):454-457. #1983-3
- Robertson, L.W., A. Parkinson, S. Bandiera, and S. Safe. 1981. Potent induction of rat liver microsomal, drug-metabolizing enzymes by 2,3,3',4,4',5-hexabromobiphenyl, a component of fireMaster. *Chem.-Biol. Interactions* 35:13-24. #1981-7
- Rodgers, P.W. and J.V. DePinto. 1981. Algae-bacteria interaction in a light-dark cycle. *Journal of Freshwater Ecology* 1(1):71-80. #1981-8
- Rodgers, P.W. and J.V. DePinto. 1983. Estimation of phytoplankton decomposition rates using two-stage continuous flow studies. *Water Res.* 17(7):761-769. #1983-9
- Rogalla, J. A., P. L. Brezonik, and G. E. Glass. 1986. Empirical models for lake acidification in the Upper Great Lakes region. *Water Air Soil Pollut.* 31:95-100 #329
- Rood, S.G., V.E. Smith, J.C. Filkins, M.L. Wildhaber, and C.J. Schmitt. 1994. Data presentation and interpretation. In: *Assessment and Remediation of Contaminated Sediments (ARCS) Program -- Assessment Guidance Document*, pp. 189-215. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL. EPA 905/B-94/002. #1994-24
- Rosiu, C.J., J.P. Giesy, and R.G. Kreis, Jr. 1989. Toxicity of vertical sediments in the Trenton Channel, Detroit River, Michigan, to *Chironomus tentans* (Insecta: Chironomidae). *J. Great Lakes Res.* 15(4):570-580. #1989-10
- Ross, M. J. and C. F. Kleiner. 1982. Shielded-needle technique for surgically implanting radio-frequency transmitters in fish. *Prog. Fish-Cult.* 44:41-43 #251
- Ross, M. J. and J. H. McCormick. 1981. Effects of external radio transmitters on fish. *Prog. Fish-Cult.* 43:67-72 #227
- Ross, M. J. and Siniff, D. B. Spatial distribution and temperature selection of fish near the thermal outfall of a power plant during fall, winter and spring. EPA 600/3-80-009. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R804997010 Contract no. 68-03-2145. Project officer: J.H. McCormick
- Rossmann, R. 1999. Horizontal and vertical distribution of mercury in 1983 Lake Superior sediments with estimates of storage and mass flux. *J. Great Lakes Res.*, 25(4):683-696. #1999-12
- Rossmann, R. 2002. Lake Michigan 1994-1996 surficial sediment mercury. *J. Great Lakes Res.*, 28(1):65-76. #2002-3
- Rossmann, R. 1995. Trace element concentrations in 1988 Saginaw Bay sediments: Comparison with historical data. In: *The Lake Huron ecosystem: Ecology, fisheries and management*. Munawar, M., T. Edsall, and J. Leach, eds. Pp. 343-364. Academic Publishing, Amsterdam. #1995-8
- Rossmann, R. and D.N. Edgington. 2000. Mercury in Green Bay, Lake Michigan surficial sediments collected between 1987 and 1990. *J. Great Lakes Res.*, 26(3):323-339. #2000-14
- Rothstein, A.B., C. Hagley, and G.J. Niemi. 1990. Fox River/Green Bay red-winged blackbird study. Unpublished paper. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1990-32
- Roush, T. H., G. L. Phipps, D. L. Spehar, C. E. Stephan, and Q. H. Pickering. 1985. Effects of pollution on freshwater organisms. *J. Water Pollut. Control Fed.* 57:667-99 #303
- Roush, T.H. 1984. St. Louis Bay benthic macroinvertebrate survey. In: *Chemical and biological studies related to the water quality of St. Louis Bay of Lake Superior*. A.R. Carlson and N.A. Thomas, eds. Pp. 57-72. EPA 600/3-84-064. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1984-15
- Rozynov, B. V., D. W. Kuehl, and R. M. Carlson. 1995. Ion-molecule reactions of charged thiols with neutral epoxides in the collision cell of a tandem quadrupole mass spectrometer. A model for *in vivo* biomolecule reactions. *Eur. Mass Spectrom.* 1:519-24 #580
- Rozynov, B. V., R. J. Liukkonen, R. M. Carlson, D. W. Kuehl, L. P. Smoliakova, R. Caple, C. J. Kuehl, and

- W. A. Smit. 1994. Mass spectral characterization of 3,4,6-tri-O-benzyl- β -C-glucopyranosides containing XC₆H₄S substituents of C(2). *Organic Mass Spec.* 29:309-14 #549
- Russo, R.C., A. Pilli, and J. Crane. 1986. Complex effluents toxicity information system. In: EPA 600/9/86/024. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens, GA. #1986-38
- Russo, R.C., D.J. Randall, and R.V. Thurston. 1988. Ammonia toxicity and metabolism in fishes. In: *Protection of River Basins, Lakes, and Estuaries : fifteen years of cooperation toward solving environmental problems in the USSR and USA*. Ryans, R.C., ed., pp. 159-173, American Fisheries Society, Bethesda, MD. #1988-63
- Russo, R.C. and R.V. Thurston. 1975. Acute toxicity of nitrite to cutthroat trout (*Salmo clarki*). Technical Report No. 75-3. Fisheries Bioassay Laboratory, Montana State University, Bozeman, MT. #1975-6
- Russo, R.C. and R.V. Thurston. 1977. The acute toxicity of nitrite to fishes. Paper presented at the symposium "Recent advances in fish toxicology", January 13-14, 1977, Oregon State University, Corvallis, OR. #1977-15
- Russo, R. C. and Pilli, A. AQUIRE: Aquatic Information Retrieval toxicity data base : project description, guidelines, and procedures. EPA 600/8-84/021. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, CR 807240.
- Russom, C., compiler. Freshwater findings: 1976-1978. Research publications of the Environmental Research Laboratory, Duluth, Minnesota. EPA 600/9-80/007. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Russom, C. L. 2002. Mining environmental toxicology information: web resources. *Toxicology*. 173:75-88 #769
- Russom, C. L., E. B. Anderson, B. E. Greenwood, and A. Pilli. 1991. ASTER: An integration of the AQUIRE data base and the QSAR system for use in ecological risk assessments. *Sci. Total Environ.* 109/110:667-70 #459
- Russom, C. L., S. P. Bradbury, S. J. Broderius, D. E. Hammermeister, and R. A. Drummond. 1997. Predicting modes of toxic action from chemical structure: Acute toxicity in the fathead minnow (*Pimephales promelas*). *Environ. Toxicol. Chem.* 16:948-67 #645
- Russom, C. L., S. P. Bradbury, and A. R. Carlson. 1995. Use of knowledge bases and QSARs to estimate the relative ecological risk of agrochemicals: A problem formulation exercise. *SAR and QSAR in Environ. Res.* 4:83-95 #581
- Russom, C. L., R. L. Breton, J. D. Walker, and S. P. Bradbury. 2003. An overview of the use of quantitative structure-activity relationships for ranking and prioritizing large chemical inventories for environmental risk assessments. *Environ. Toxicol. Chem.* 22:1810-1821 #797
- Russom, C. L., R. A. Drummond, and A. D. Hoffman. 1988. Acute toxicity and behavioral effects of acrylates and methacrylates to juvenile fathead minnows. *Bull. Environ. Contam. Toxicol.* 41:589-96 #367
- Russom, C. and S. Bradbury. 1996. ECOTOX released: an integration of three U.S. EPA ecotoxicity databases. *SETAC News*, 16(4):19, 24. #1996-15
- Russom, C.L., S.P. Bradbury, W.A. Holacek, and D.J. Grunwald. 1997. ECOTOX: An ecological effects database. In: *Computing in Environmental Resource Management, proceedings*, December 2-4, 1996, Research Triangle Park, NC. Pp. 387-397. Air & Waste Management Association, Pittsburgh, PA. #1997-6
- Russom, C.L. and S.J. Broderius. 1991. A chronic aquatic toxicity database for development of predictive toxicology models for industrial organic chemicals. 600/X-91/031. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1991-29
- Russom, C.L., D.L. Brooke, and S.E. Beder-Miller. 1988. Report on fathead minnow chronic toxicity data base for QSAR models of ecotoxicity. EPA 600/x-88-241. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-45
- Russom, C.L., compiler. 1980. Freshwater findings, 1976-1978. Research publications of the Environmental Research Laboratory, Duluth, MN. EPA 600/9-80/007. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1980-20
- Rygwelski, K.R., W.L. Richardson, and D.D. Endicott. 1999. A screening-level model evaluation of

- atrazine in the Lake Michigan Basin. *J. Great Lakes Res.* 25(1):94-106. #1999-2
- S
Saber, D.L. and R.L. Crawford. 1985. Isolation and characterization of *Flavobacterium* strains that degrade pentachlorophenol. *Applied and Environmental Microbiology* 50(6):1512-1518. #1985-16
- Safe, S. G. 1987. Determination of 2, 3, 7, 8-TCDD toxic equivalent factors (TEFs): Support for the use of the in vitro AHH induction assay. *Chemosphere* 16(4):791-802. #1987-20
- Safe, S. G. 1982. Halogenated hydrocarbons and aryl hydrocarbons identified in human tissues. *Toxicological and Environmental Chemistry* 5:153-165. #1982-5
- Safe, S. G. 1985. Polychlorinated biphenyls: Progress and problems. In: *Hazardous contaminants in Ontario: Human and environmental effects*. Hutchinson, T.C. and S.M. Evans, eds. Institute for Environmental Studies, University of Toronto, Ontario, Canada. Pp. 60-68. #1985-13
- Safe, S. G., Mason, B. Keys, K. Farrell, B. Zmudzka, Sawyer T., J. Piskorska-Pliszczynska, L. Safe, M. Romkes, and S. Bandiera. 1986. Polychlorinated dibenzo-p-dioxins and dibenzofurans: Correlation between in vitro and in vivo structure-activity relationships (SARs). *Chemosphere* 15(9-12):1725-1731. #1986-12
- Safe, S.G., L. Safe, and M.D. Mullin. 1985. Polychlorinated biphenyls: Congener-specific analysis of a commercial mixture and a human milk extract. *J. Agric. Food Chem.* 33:24-29. #1985-4
- Safe, S.G., T. Zacharewski, L. Safe, M. Harris, C. Yao, and M. Holcomb. 1989. Validation of the AHH induction bioassay for the determination of 2,3,7,8-TCDD toxic equivalents. *Chemosphere* 18(1-6):941-946. #1989-30
- Safe, S.H. and R.K. Boyd. 1981. Mass spectrometry. In: *Pesticide Analysis*. K.G. Das, ed. Pp. 329-364. Marcel Dekker, Inc., New York, NY. #1981-3
- Safe, S.H., L. Safe, and M.D. Mullin. 1987. Polychlorinated biphenyls: Environmental occurrence and analysis. In: *Environmental toxin series, vol. 1*. S. Safe and R.L. Detrick, eds. Pp. 1-13. Springer-Verlag, Berlin. #1987-39
- Salmela, J. A. and R. L. Anderson. 1978. Thermal shock effects of larvae of caddis fly *Brachycentrus americanus*. *J. Minn. Acad. Sci.* 44:25-28 #181
- Samuelson, D. F. Water quality: Western Fish Toxicology Sation and western Oregon rivers. EPA 600/3-76/077. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Sanders, H. O. Sublethal effects of toxaphene on daphnids, scuds, and midges. EPA 600/3-80/006. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract no. EPA-IAG-141(D). Project officer: L. Mueller
- Sanville, W. 1988. Responses of an Alaskan wetland to nutrient enrichment. *Aquat. Bot.* 30:231-43 #368
- Sanville, W. 1991. Criteria to protect wetland ecological integrity. In: *Water quality standards for the 21st century: Proceedings of a conference*. Pp. 85-88. Office of Water, U.S. Environmental Protection Agency, Washington, D.C. #1991-24
- Sauter, S., G.A. LeBlanc, S.J. Ells, and K. Buxton. 197? Acute and chronic toxicity of propachlor, methomyl, Baygon, and Baytex to the water flea (*Daphnia magna*) and the fathead minnow (*Pimephales promelas*). Submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN by E G & G Bionomics, Wareham, MA. #197?-4
- Sauter, S.; Buxton, K. S.; Macek, K. J., and Petrocelli, S. R. Effects of exposure to heavy metals on selected freshwater fish. Toxicity of copper, cadmium, chromium and lead to eggs and fry of seven fish species. EPA 600/3-76/105. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # 68-01-0740. Project officer: D.A. Benoit
- Scheller, R. M., V. M. Snarski, J. G. Eaton, and G. W. Oehlert. 1999. An analysis of the influence of annual thermal variables on the occurrence of fifteen warmwater fishes. *Trans. Am. Fish. Soc.* 128:257-64 #714
- Schelske, C.L. 1980. Dynamics of nutrient enrichment in large lakes: The Lake Michigan case. In: *Restoration of lakes and inland waters*. EPA 440/5-81-010. Office of Water Regulations and Standards, U.S. Environmental Protection Agency, Washington, D.C. #1980-4
- Schelske, C.L. 1988. Historic trends in Lake Michigan silica concentrations. *Int. revue ges. Hydrobiol.* 73(5):559-591. #1988-19
- Schelske, C.L. 1985. Silica depletion in Lake Michigan: Verification using Lake Superior as an

- environmental reference standard. *J. Great Lakes Res.* 11(4):492-500. #1985-3
- Schelske, C.L., B.J. Eadie, and G.L. Krausse. 1984. Measured and predicted fluxes of biogenic silica in Lake Michigan. *Limnol. Oceanogr.* 29(1):99-110. #1984-4
- Schelske, C.L., E.F. Stoermer, D.J. Conley, J.A. Robbins, and R.M. Glover. 1983. Early eutrophication in the lower Great Lakes: New evidence from biogenic silica in sediments. *Science* 222:320-322. #1983-2
- Schelske, C.L., E.F. Stoermer, G.L. Fahnstiel, and M. Haibach. 1986. Phosphorus enrichment, silica utilization, and biogeochemical silica depletion in the Great Lakes. *Canadian Journal of Fisheries and Aquatic Sciences* 43(2):407-415. #1986-7
- Schelske, C. L.; Moll, R. A., and Simmons, M. S. Limnological conditions of southern Lake Huron, 1974 and 1975. EPA 600/3-80/074. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant no. R803086. Project officer: N.A. Thomas
- Schelske, C. L.; Stoermer, E. F.; Gannon, J. E., and Simmons, M. S. Biological, chemical and physical relationships in the Straits of Mackinac. EPA 600/3-76/095. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802721. Project officer: N. Thomas
- Schmieder, P., Y. Koleva, and O. Mekenyan. 2002. A reactivity pattern for discrimination of ER agonism and antagonism based on 3-D molecular attributes. *SAR and QSAR in Environ. Res.* 13:353-64 #767
- Schmieder, P., O. Mekenyan, S. Bradbury, and G. Veith. 2003. QSAR prioritization of chemical inventories for endocrine disruptor testing. *Pure Appl. Chem.* 75:2389-96 #810
- Schmieder, P., M. Tapper, A. Linnum, J. Denny, R. Kolanczyk, and R. Johnson. 2000. Optimization of a precision-cut trout liver tissue slice assay as a screen for vitellogenin induction: comparisons of slice incubation techniques. *Aquat. Toxicol.* 49:251-68 #740
- Schmieder, P. K., G. T. Ankley, O. Mekenyan, J. D. Walker, and S. Bradbury. 2003. Quantitative structure-activity relationship models for prediction of estrogen receptor binding affinity of structurally diverse chemicals. *Environ. Toxicol. Chem.* 22:1844-54 #798
- Schmieder, P. K., A. O. Aptula, E. J. Routledge, J. P. Sumpter, and O. G. Mekenyan. 2000. Estrogenicity of alkylphenolic compounds: a 3-D structure-activity evaluation of gene activation. *Environ. Toxicol. Chem.* 19:1727-40 #737
- Schmieder, P. K. and T. R. Henry. 1988. Plasma binding of 1-butanol, phenol, nitrobenzene and pentachlorophenol in the rainbow trout and rat: A comparative study. *Comp. Biochem. Physiol.* 91C:413-18 #369
- Schmieder, P. K., D. B. Lothenbach, J. E. Tietge, R. J. Erickson, and R. D. Johnson. 1995. [³H]-2,3,7,8-TCDD uptake and elimination kinetics of medaka (*Oryzias latipes*). *Environ. Toxicol. Chem.* 14:1735-43 #582
- Schmieder, P. K., M. A. Tapper, R. C. Kolanczyk, D. E. Hammermeister, B. R. Sheedy, and J. S. Denny. 2003. Discriminating redox cycling and arylation pathways of reactive chemical toxicity in trout hepatocytes. *Toxicological Sciences*. 72:66-76 #783
- Schmieder, P. K. and L. J. Weber. 1992. Blood and water flow limitations on gill uptake of organic chemicals in the rainbow trout (*Oncorhynchus mykiss*). *Aquat. Toxicol.* 24:103-22 #486
- Schmieder, P.K. and L.J. Weber. 1991. Blood flow and water flow limitations of gill uptake of butanol and decanol in the rainbow trout (abstract only). *The Toxicologist* 11(1):201. #1991-17
- Schmude, K. L., K. Liber, T. D. Corry, and F. S. Stay. 1999. Effects of 4-nonylphenol on benthic macroinvertebrates and insect emergence in littoral enclosures . *Environ. Toxicol. Chem.* 18:386-93 #700
- Schnoor, J.L., G.R. Carmichael, and F.A. Van Schepen. 1982. An integrated approach to acid rainfall assessments. In: *Energy and environmental chemistry: Acid rain*. Vol. 2. Keith, L.H., ed. Ann Arbor Science, Ann Arbor, MI. Pp. 225-243. #1982-14
- Schnoor, J.L., S. Lee, N.P. Nikolaïdis, and D.R. Nair. 1986. Lake resources at risk to acidic deposition in the eastern United States. *Water, Air, and Soil Pollution* 31:1091-1101. #1986-20
- Schnoor, J. L., N. P. Nikolaïdis, and G. E. Glass. 1986. Lake resources at risk to acidic deposition in the Upper Midwest. *J. Water Pollut. Control Fed.* 58:139-48 #330
- Schoettger, R.A. and R.C. Russo. 1988. Section 3. Effects of pollutants on aquatic organisms and ecosystems: development of water quality criteria. In: *Protection of River Basins, Lakes, and*

- Estuaries : fifteen years of cooperation toward solving environmental problems in the USSR and USA.* Ryans, R.C., ed., pp. 117-119, American Fisheries Society, Bethesda, MD. #1988-62
- Schoff, P. K. and G. T. Ankley. 2004. Effects of methoprene, its metabolites, and breakdown products on retinoid-activated pathways in transfected cell lines. *Environ. Toxicol. Chem.* 23:1305-10 #823
- Schoff, P. K. and G. T. Ankley. 2002. Inhibition of retinoid activity by components of a paper mill effluent. *Environ. Pollut.* 119:1-4 #771
- Schubauer-Berigan, M. K., J. R. Amato, G. T. Ankley, S. E. Baker, L. P. Burkhard, J. R. Dierkes, J. J. Jenson, M. T. Lukasewycz, and T. J. Norberg-King. 1993. The behavior and identification of toxic metals in complex mixtures: Examples from effluent and sediment pore water toxicity identification evaluations. *Arch. Environ. Contam. Toxicol.* 24:298-306 #513
- Schubauer-Berigan, M. K. and G. T. Ankley. 1991. The contribution of ammonia, metals, and nonpolar organic compounds to the toxicity of sediment interstitial water from an Illinois river tributary. *Environ. Toxicol. Chem.* 10:925-39 #460
- Schubauer-Berigan, M. K., J. R. Dierkes, P. D. Monson, and G. T. Ankley. 1993. pH-dependent toxicity of Cd, Cu, Ni, Pb, and Zn to *Ceriodaphnia dubia*, *Pimephales promelas*, *Hyalella azteca* and *Lumbriculus varigatus*. *Environ. Toxicol. Chem.* 12:1261-66 #514
- Schubauer-Berigan, M. K., P. D. Monson, C. W. West, and G. T. Ankley. 1995. Influence of pH on the toxicity of ammonia to *Chironomus tentans* and *Lumbriculus variegatus*. *Environ. Toxicol. Chem.* 14:713-17 #583
- Schubauer-Berigan, M.K., J.R. Dierkes, and G.T. Ankley. 1990. Toxicity identification evaluations of contaminated sediments in the Buffalo River, NY and the Saginaw River, MI. National Effluent Toxicity Assessment Center Technical Report 20-90. Final Report to ARCS Risk Assessment and Modeling Workgroup. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN. #1990-21
- Schubauer-Berigan, M. Survey of sediment quality in the Duluth/Superior Harbor : 1993 sampling results. EPA 905-R97-005. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL.
- Schulz, K.L. and P.M. Yurista. 1995. Diet composition from allozyme analysis in the predatory cladoceran *Bythotrephes cederstroemi*. *Limnol. Oceanogr.*, 40(4):821-826. #1995-17
- Schulz, K.L. and P.M. Yurista. 1999. Implications of an invertebrate predator's (*Bythotrephes cederstroemi*) atypical effects on a pelagic zooplankton community. *Hydrobiologia*, 380:179-183. #1999-20
- Schultz, R. and R. O. Hermanutz. 1990. Transfer of toxic concentrations of selenium from parent to progeny in the fathead minnow (*Pimephales promelas*). *Bull. Environ. Contam. Toxicol.* 45:568-73 #428
- Schultz, T. W., G. W. Holcombe, and G. L. Phipps. 1986. Relationships of quantitative structure-activity to comparative toxicity of selected phenols in the *Pimephales promelas* and *Tetrahymena pyriformis* test systems. *Ecotoxicol. Environ. Saf.* 12:146-53 #331
- Schultz, T.W., G.L. Phipps, and G.D. Veith. 1987. Report on low cost amphibian test for specific cytotoxic effects. Part I: The toxic and teratogenic effects of hydrazines. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1987-7
- Schultz, T.W., T.S. Ranney, G.W. Riggan, and M. Cajina-Quetzada. 1988. Structure-activity relationships for osteolathyrism. I. Effects of altering the semicarbazide structure. *Trans. Am. Microsc. Soc.* 107(2):113-126. #1988-18
- Schumacher, B., R. Fox, J.C. Filkins, and B. Barrick. 1994. Quality assurance and quality control. In: *Assessment and Remediation of Contaminated Sediments (ARCS) Program -- Assessment Guidance Document*, pp. 10-32. Great Lakes National Program Office, U.S. Environmental Protection Agency, Chicago, IL. EPA 905/B-94/002. #1994-22
- Schweiger, E.W., J.E. Diffendorfer, R.D. Holt, R. Pierotti, and M.S. Gaines. 2000. The interaction of habitat fragmentation, plant, and small mammal succession in an old field. *Ecol. Monographs*, 70(3):383-400. #2000-5
- Sediment Oversight Technical Committee. Sediment classification methods compendium. EPA 823/R-92-006. Office of Water, U.S. Environmental Protection Agency, Washington, D.C..
- Selgeby, J.H. 1995. Abundance, distribution, biology, and community impacts of invading Eurasian ruffe. Final report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth,

MN. #1995-14

- Serrano, J., D. W. Kuehl, and S. Naumann. 1993. Analytical procedures and quality assurance criteria for the determination of major and minor deoxynucleosides in fish tissue DNA by liquid chromatography-ultraviolet spectroscopy and liquid chromatography-thermospray mass spectrometry. *J. Chromatogr. Biomed. Appl.* 615:203-13 #515
- Serrano, J., C. M. Palmeira, D. W. Kuehl, and K. B. Wallace. 1999. Cardioselective and cumulative oxidation of mitochondrial DNA following subchronic doxorubicin administration. *Biochim. Biophys. Acta.* 1411:201-5 #711
- Serrano, J., C. M. Palmeira, K. B. Wallace, and D. W. Kuehl. 1996. Determination of 8-hydroxydeoxyguanosine in biological tissue by liquid chromatography/electrospray ionization-mass spectrometry/mass spectrometry. *Rap. Comm. Mass Spec.* 10:1789-91 #627
- Shannon, L.J. and R.L. Anderson. 1992. Use of the mixed flask culture (MFC) microcosm protocol to estimate the survival and effects of microorganisms added to freshwater ecosystems. In: *Microbial ecology: Principles, methods, and applications*. M.A. Levin, R.J. Seidler, and M. Rogul, eds. Pp. 625-641. McGraw-Hill, Inc., New York, NY. #1992-22
- Shannon, L.J., T.E. Flum, R.L. Anderson, and J.D. Yount. 1989. Adaptation of mixed flask culture microcosms for testing the survival and effects of introduced microorganisms. In: *Aquatic toxicology and hazard assessment, 12th vol.* U.M. Cowgill and L.R. Williams, eds. Pp. 224-239. ASTM STP 1027. American Society for Testing and Materials, Philadelphia, PA. #1989-35
- Shannon, L.J., M.C. Harrass, J.D. Yount, and C.T. Walbridge. 1987. A comparison of mixed flask culture and standardized laboratory model ecosystems for toxicity testing. In: *Community toxicity testing*. J. Cairns, Jr., ed. Pp. 135-157. ASTM STP 920. American Society for Testing and Materials, Philadelphia, PA. #1987-34
- Shapiro, J. and G.E. Glass. 1974. Synergistic effects of phosphate and manganese on growth of Lake Superior algae. Presented at the Winnipeg Congress of the International Association for Theoretical and Applied Limnology, August 1974. #1974-3
- Shaver, M. P. and Page, P. Local land-use and landownership patterns near a power plant : Wisconsin power plant impact study. EPA 600/3-80/021. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803971. Notes: Project officer: G.E. Glass
- Sheedy, B. R., J. M. Lazorchak, D. J. Grunwald, Q. H. Pickering, A. Pilli, D. Hall, and R. Webb. 1991. Effects of pollution on freshwater organisms. *J. Water Pollut. Control Fed.* 63:619-96 #461
- Sheedy, B. R., V. R. Mattson, J. S. Cox, P. A. Kosian, G. L. Phipps, and G. T. Ankley. 1998. Bioconcentration of polycyclic aromatic hydrocarbons by the freshwater oligochaete *Lumbriculus variegatus*. *Chemosphere.* 36:3061-70 #679
- Sheng, Y. P. and Lick, W. A two-mode free-surface numerical model for the three-dimensional time-dependent currents in large lakes. EPA 600/3-80/047. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803704.
- Shephard, B. 1983. The effect of reduced pH and elevated aluminum concentrations on three species of zooplankton: *Ceriodaphnia reticulata*, *Daphnia magna* and *Daphnia pulex*. Report submitted to Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1983-16
- Shiraishi, H., D.S. Carter, and R.A. Hites. 1989. Identification and determination of *tert*-alkylphenols in carp from the Trenton Channel of the Detroit River, Michigan, USA. *Biomed. Environ. Mass Spectrom.* 18:478-483. #1989-11
- Shubat, P.J., S.H. Poirier, M.L. Knuth, and L.T. Brooke. 1982. Acute toxicity of tetrachloroethylene and tetrachloroethylene with dimethylformamide to rainbow trout (*Salmo gairdneri*). *Bull. Environm. Contam. Toxicol.*, 28:7-10. #1982-22
- Sibley, P. K., G. T. Ankley, A. M. Cotter, and E. N. Leonard. 1996. Predicting chronic toxicity of sediments spiked with zinc: An evaluation of the acid-volatile sulfide model using a life-cycle test with the midge *Chironomus tentans*. *Environ. Toxicol. Chem.* 15:2102-12 #628
- Sibley, P. K., D. A. Benoit, and G. T. Ankley. 1998. Life cycle and behavioural assessments of the influence of substrate particle size on *Chironomus tentans* (Diptera: Chironomidae) in laboratory assays. *Hydrobiologia.* 361:1-9 #676
- Sibley, P. K., D. A. Benoit, and G. T. Ankley. 1997. The significance of growth in *Chironomus tentans*

- sediment toxicity tests: Relationship to reproduction and demographic endpoints. *Environ. Toxicol. Chem.* 16:336-45 #636
- Sibley, P. K., D. A. Benoit, M. D. Balcer, G. L. Phipps, C. W. West, R. A. Hoke, and G. T. Ankley. 1999. In situ bioassay chamber for assessment of sediment toxicity and bioaccumulation using benthic invertebrates. *Environ. Toxicol. Chem.* 18:2325-36 #723
- Sibley, P. K., J. Legler, D. G. Dixon, and D. R. Barton. 1997. Environmental health assessment of the benthic habitat adjacent to a pulp mill discharge. I. Acute and chronic toxicity of sediments to benthic macroinvertebrates. *Arch. Environ. Contam. Toxicol.* 32:274-84 #642
- Sibley, P. K., P. D. Monson, and G. T. Ankley. 1997. The effect of gut contents on dry weight estimates of *Chironomus tentans* larvae: Implications for interpreting toxicity in freshwater sediment toxicity tests. *Environ. Toxicol. Chem.* 16:1721-26 #653
- Sibley, P.K., G.T. Ankley, and D.A. Benoit. 2001. Factors affecting reproduction and the importance of adult size on reproductive output of the midge *Chironomus tentans*. *Environ. Toxicol. Chem.*, 20(6):1296-1303. #2001-3
- Siefert, R. E. 1969. Characteristics for separation of white and black crappie larvae. *Trans. Am. Fish. Soc.* 98:326-28 #34
- Siefert, R. E. 1972. First food of larval yellow perch, white sucker, bluegill, emerald shiner, and rainbow smelt. *Trans. Am. Fish. Soc.* 101:219-25 #74
- Siefert, R. E., A. R. Carlson, and L. J. Herman. 1974. Effects of reduced oxygen concentrations on the early life stages of mountain whitefish, smallmouth bass, and white bass. *Prog. Fish-Cult.* 36:186-90 #113
- Siefert, R. E. and L. J. Herman. 1977. Spawning success of the black crappie, *Pomoxis nigromaculatus*, at reduced dissolved oxygen concentrations. *Trans. Am. Fish. Soc.* 106:376-79 #161
- Siefert, R. E., W. A. Spoor, and R. F. Syrett. 1973. Effects of reduced oxygen concentrations on northern pike (*Esox lucius*) embryos and larvae. *J. Fish. Res. Board Can.* 30:849-52 #95
- Siefert, R.E. 1975. Bibliography for larval fish identification. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1975-4
- Siefert, R.E. 1968. Reproductive behavior, incubation and mortality of eggs, and postlarval food selection in the white crappie. *Transactions of the American Fisheries Society* 97(3):252-259. #1968-3
- Siefert, R.E., L.J. Heinis, M.L. Knuth, R.L. Anderson, J.C. Brazner, N. Larson, and D.A. Jensen. 1987. Effects of Dursban (chlorpyrifos) on aquatic organisms in enclosures in a natural pond. Final report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1987-6
- Siefert, R.E., C.F. Kleiner, B.R. Nordling, L.H. Mueller, D.K. Tanner, A.W. Jarvinen, J.A. Zischke, N. Larson, and R.L. Anderson. 1984. Effects of Dursban on non-target aquatic organisms in a natural pond undergoing mosquito control treatment. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-2
- Siefert, R.E., C.F. Kleiner, D.K. Tanner, B. Nordling, R.L. Anderson, J.A. Zischke, N.J. Larson, and J. Helgen. 1986. Effects of Abate® (Temephos) on non-target aquatic organisms in a natural pond undergoing mosquito control treatment. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1986-34
- Siefert, R.E., S.J. Lozano, J.C. Brazner, and M.L. Knuth. 1989. Littoral enclosures for aquatic field testing of pesticides: Effects of chlorpyrifos on a natural system. In: *Using mesocosms to assess the aquatic ecological risk of pesticides: Theory and practice*. Pp. 57-73. Miscellaneous Publications No. 75. Entomological Society of America, Lanham, Maryland. #1989-38
- Siefert, R.E. and W.A. Spoor. 1974. Effects of reduced oxygen on embryos and larvae of the white sucker, coho salmon, brook trout, and walleye. In: *Early life history of fish*. J.H.S. Blaxter, ed. Pp. 487-495. Springer-Verlag, New York, NY. #1974-13
- Sierszen, M. E. 1990. Variable selectivity and the role of nutritional quality in food selection by a planktonic rotifer. *Oikos*. 59:241-47 #429
- Sierszen, M. E., H. L. Boston, and M. J. Horn. 1991. Zooplankton population dynamics in experimentally toxified pond ecosystems. *Verh. Internat. Verein. Limnol.* 24:1517-21 #462
- Sierszen, M. E. and T. M. Frost. 1993. Response of predatory zooplankton populations to the experimental acidification of Little Rock Lake, Wisconsin. *J. Plankton Res.* 15:553-62 #516
- Sierszen, M. E. and T. M. Frost. 1992. Selectivity in suspension feeders: Food quality and the cost of being selective. *Arch. Hydrobiol.* 123:257-73 #487

- Sierszen, M. E., J. R. Keough, and C. A. Hagley. 1996. Trophic analysis of ruffe (*Gymnocephalus cernuus*) and white perch (*Morone americana*) in a Lake Superior coastal food web, using stable isotope techniques. *J. Great Lakes Res.* 22:436-43 #629
- Sierszen, M. E. and S. J. Lozano. 1998. Zooplankton population and community responses to the pesticide azinphos-methyl in freshwater littoral enclosures. *Environ. Toxicol. Chem.* 17:907-14 #674
- Sierszen, M. E., M. E. McDonald, and D. A. Jensen. 2003. Benthos as the basis for arctic lake food webs. *Aquat. Ecol.* 37:437-45 #809
- Sierszen, M. E., J. A. Morrice, M. F. Moffett, and C. W. West. 2004. Benthic versus planktonic foundations of three Lake Superior coastal wetland food webs. *J. Great Lakes Res.* 30:31-43 #822
- Sierszen, M.E. and T.M. Frost. 1990. Effects of an experimental lake acidification on zooplankton feeding rates and selectivity. *Can. J. Fish. Aquat. Sci.* 47(4):772-779. #1990-30
- Sierszen, M.E. and C.J. Watras. 1987. Rapid-freeze preservation minimizes radioisotope leakage from zooplankton in feeding experiments. *Journal of Plankton Research* 9(5):945-953. #1987-32
- Sigford, A. 1995. Giving Lake Superior a check-up. *Lake Superior Magazine* 1995(February-March):21-22. #1995-3
- Silva-Wilkinson, R. A., L. P. Burkhard, B. R. Sheedy, G. M. DeGraeve, and R. A. Lordo. 1999. A simple comparison of mass spectral search results and implications for environmental screening analyses. *Arch. Environ. Contam. Toxicol.* 36:109-14 #695
- Silva-Wilkinson, R. A., G. M. DeGraeve, L. P. Burkhard, D. W. Tholen, and B. R. Sheedy. 2000. Results of an interlaboratory evaluation of an analytical screening method for assessing persistent bioaccumulative toxic chemicals in sediment samples. *Environ. Toxicol. Chem.* 19:2218-23 #744
- Simon, R., J.E. Tietge, B. Michalke, and S. Degitz. 2002. Iodine species and the endocrine system: thyroid hormone levels in adult *Danio rerio* and developing *Xenopus laevis*. *Anal. Bioanal. Chem.*, 372:481-485. #2002-X-2002
- Simsiman, G.V., G. Chesters, and A.W. Andren. 1987. Effect of ash disposal ponds on groundwater quality at a coal-fired power plant. *Water Research* 21(4):417-426. #1987-26
- Sinokrot, B. A., H. G. Stefan, J. H. McCormick, and J. G. Eaton. 1995. Modeling of climate change effects on stream temperatures and fish habitats below dams and near groundwater inputs. *Clim. Change*. 30:181-200 #584
- Sinokrot, B.A. and H.G. Stefan. 1992. Deterministic modeling of stream water temperatures: development and applications to climate change effects on fish habitat. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1992-34
- Sinokrot, B.A. and H.G. Stefan. 1993. Stream temperature dynamics: Measurements and modeling. *Water Resources Research* 29(7):2299-2312. #1993-9
- Skogerboe, R. K.; Lavallee, C. S.; Miller, M. M., and Dick, D.L. Environmental effects of oil shale mining and processing. Part III : The water quality of Piceance Creek, Colorado, prior to oil shale processing. EPA 600/3-79-055. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Skogerboe, R. K.; Lavallee, C. S.; Miller, M. M., and Dick, D. L. Environmental effects of western coal surface mining. Part III - The water quality of Trout Creek, Colorado. EPA 600/3-79/008. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950. Project officer: D.I. Mount
- Skoglund, R.S., K. Stange, and D.L. Swackhamer. 1996. A kinetics model for predicting the accumulation of PCBs in phytoplankton. *Environ. Sci. Technol.*, 30(7):2113-2120. #1996-29
- Smith, L.L., S.I. Auerbach, J. Cairns, Jr., D.I. Mount, G.A. Rohlich, J.B. Sprague, and W.L. Klein. 1973. ORSANCO 24-hour bioassay. Unpublished paper. #1973-23
- Smith, L. L., Jr.; Broderius, S. J.; Oseid, D. M.; Kimball, G. L.; Koenst, W. M., and Lind, D. T. Acute and chronic toxicity of HCN to fish and invertebrates. EPA 600/3-79/009. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802914. Project officer: R. Drummond
- Smith, L. L., Jr.; Oseid, D. M.; Adelman, I. R., and Broderius, S. J. Effect of hydrogen sulfide on fish and invertebrates. Part I - Acute and chronic toxicity studies. EPA 600/3-76/062a. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection

- Agency, Duluth, MN, Grant # R800992. Project officer: K.E.F. Hokanson
- Smith, L. L., Jr. and Koenst, W. M. Temperature effects on eggs and fry of percoid fishes. EPA 660/3-75-017. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant # R800704.
- Smith, L. S.; Saddler, J. B.; Cardwell, R. C.; Mearns, A. J.; Miles, H. M.; Newcomb, T. W., and Watters, K. C. Response of teleost fish to environmental stress. EPA 18050 EBK 02/71. Water Quality Office Federal Water Quality Administration, U.S. Environmental Protection Agency, Washington, DC .
- Smith, V.E., J.E. Rathbun, and J.C. Filkins. 1992. Sampling, characterizing, and mapping contaminated sediment in river harbors. Hazardous Materials Control 1992(September/October):22-28. #1992-5
- Smith, V.E., J.E. Rathbun, S.G. Rood, and L.L. Huellmantel. 1996. Technical consideration in sediment quality surveys. *J. Great Lakes Res.*, 22(3):512-522. #1996-26
- Smith, V. E.; Lee, K. W.; Filkins, J. C.; Hartwell, K. W.; Rygwelski, K. R., and Townsend, J.M. Survey of chemical factors in Saginaw Bay (Lake Huron). EPA 600/3-77/125. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802685. Project officer: V.J. Bierman, Jr.
- Smith, W.E., T.H. Roush, and J.T. Fiandt. 1984. Toxicity of ammonia to early life stages of bluegill (*Lepomis macrochirus*). EPA 600/x-84-175. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-3
- Smith, W. E. 1975. Breeding and culture of two sunfish, *Lepomis cyanellus* and *L. megalotis*, in the laboratory. *Prog. Fish-Cult.* 37:227-29 #122
- Smith, W. E. 1972. Culture, reproduction, and temperature tolerance of *Pontoporeia affinis* in the laboratory. *Trans. Am. Fish. Soc.* 101:253-56 #75
- Smith, W. E. 1973. A cyprinodontid fish, *Jordanella floridae*, as reference animal for rapid chronic bioassays. *J. Fish. Res. Board Can.* 30:329-30 #96
- Smith, W. E. 1976. Larval feeding and rapid maturation of bluegills in the laboratory. *Prog. Fish-Cult.* 38:95-97 #138
- Smith, W. E. 1973. Thermal tolerance of two species of *Gammarus*. *Trans. Am. Fish. Soc.* 102:431-33 #97
- Smith, W. E. 1970. Tolerance of *Mysis relicta* to thermal shock and light. *Trans. Am. Fish. Soc.* 99:418-22 #47
- Snarski, V. M. 1990. Interactions between *Bacillus thuringiensis* subsp. *israelensis* and fathead minnows, *Pimephales promelas* Rafinesque, under laboratory conditions. *Appl. Environ. Microbiol.* 56:2618-22 #430
- Snarski, V. M. 1982. The response of rainbow trout *Salmo gairdneri* to *Aeromonos hydrophila* after sublethal exposures to PCB and copper. *Environ. Pollut. Ser. A*. 28:219-32 #252
- Snarski, V. M. and G. F. Olson. 1982. Chronic toxicity and bioaccumulation of mercuric chloride in the fathead minnow (*Pimephales promelas*). *Aquat. Toxicol.* 2:143-56 #253
- Snarski, V.M. 1988. Ecological interactions between MPCAs and fish: Factors influencing the accumulation of *Bacillus thuringiensis* var. *israelensis* in freshwater fish during aqueous exposures. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-55
- Snarski, V. M. and Puglisi, F. A. Effects of Aroclor 1254 on brook trout, *Salvelinus fontinalis*. EPA 600/3-76/112. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Snyder, T.P., K.M. Switzer, and R.E. Keen. 1991. Allozymic variability in toxicity-testing strains of *Ceriodaphnia dubia* and in natural populations of *Ceriodaphnia*. *Environmental Toxicology and Chemistry* 10:1045-1049. #1991-8
- Solem, L. E., R. C. Kolanczyk, and J. M. McKim, III. 2003. An in vivo microdialysis method for the qualitative analysis of hepatic phase I metabolites of phenol in rainbow trout (*Oncorhynchus mykiss*). *Aquat. Toxicol.* 62:337-47 #784
- Solomon, K.R., G.T. Ankley, R. Baudo, G.A. Burton, C.G. Ingersoll, W. Lick, S.N. Luoma, D.D. MacDonald, T.B. Reynoldson, R.C. Swartz, and W.J. Warren-Hicks. 1997. Session 6: Critical issues in methodological uncertainty: Workgroup summary report on methodological uncertainty. In: *Ecological risk assessment of contaminated sediments*. C.G. Ingersoll, T. Dillon, G.R. Biddinger, eds. Pp. 271-296. SETAC Press, Pensacola, FL. #1997-3

- Sonzogni, W.C. and W.R. Swain. 1980. Perspectives on U.S. Great Lakes chemical toxic substances research. *J. Great Lakes Res.* 6(4):265-274. #1980-12
- Sorensen, J. A. and G. E. Glass. 1987. Ion and temperature dependence of electrical conductance for natural waters. *Anal. Chem.* 59:1594-97 #357
- Sorensen, J. A., Glass G.E., and K. W. Schmidt. 1994. Regional patterns of wet mercury deposition. *Environ. Sci. Technol.* 28:2025-32 #520
- Sorensen, J. A., G. E. Glass, K. W. Schmidt, J. K. Huber, and G. R. Rapp, Jr. 1990. Airborne mercury deposition and watershed characteristics in relation to mercury concentrations in water, sediments, plankton and fish of eighty northern Minnesota lakes. *Environ. Sci. Technol.* 24:1716-27 #431
- Sorensen, J. A., L. C. Thompson, and G. E. Glass. 1985. Quantitative analysis of aqueous species using raman spectrometry and equilibrium model calculations. *Anal. Chem.* 57:1087-91 #304
- Spehar, R. L. 1976. Cadmium and zinc toxicity to flagfish, *Jordanella floridae*. *J. Fish. Res. Board Can.* 33:1939-45 #139
- Spehar, R. L., R. L. Anderson, and J. T. Fiandt. 1978. Toxicity and bioaccumulation of cadmium and lead in aquatic invertebrates. *Environ. Pollut.* 15:195-208 #182
- Spehar, R. L. and A. R. Carlson. 1984. Derivation of site-specific water quality criteria for cadmium and the St. Louis River Basin, Duluth, Minnesota. *Environ. Toxicol. Chem.* 3:651-65 #288
- Spehar, R. L., R. W. Carlson, A. E. Lemke, D. I. Mount, Q. H. Pickering, and V. M. Snarski. 1980. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 52:1703-68 #212
- Spehar, R. L., G. M. Christensen, C. Curtis, A. E. Lemke, T. J. Norberg, and Q. H. Pickering. 1982. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 54:877-922 #254
- Spehar, R. L., P. M. Cook, G. E. Elonen, G. W. Holcombe, R. D. Johnson, J. D. Fernandez, and J. E. Tietge. 1997. Comparison of early-life-stage sensitivity of freshwater fish exposed as eggs to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). *Organohalogen Compounds.* 33:313-17 #818
- Spehar, R. L. and J. T. Fiandt. 1986. Acute and chronic effects of water quality criteria-based metal mixtures on three aquatic species. *Environ. Toxicol. Chem.* 5:917-31 #332
- Spehar, R. L., J. T. Fiandt, R. L. Anderson, and D. L. DeFoe. 1980. Comparative toxicity of arsenic compounds and their accumulation in invertebrates and fish. *Arch. Environ. Contam. Toxicol.* 9:53-63 #213
- Spehar, R. L., G. W. Holcombe, R. W. Carlson, R. A. Drummond, J. D. Yount, and Q. H. Pickering. 1979. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 51:1616-94 #192
- Spehar, R. L., A. E. Lemke, Q. H. Pickering, T. H. Roush, R. C. Russo, and J. D. Yount. 1981. Effects of pollution on freshwater fish. *J. Water Pollut. Control Fed.* 53:1028-76 #228
- Spehar, R. L., E. N. Leonard, and D. L. DeFoe. 1978. Chronic effects of cadmium and zinc mixtures on flagfish (*Jordanella floridae*). *Trans. Am. Fish. Soc.* 107:354-60 #183
- Spehar, R. L., H. P. Nelson, M. J. Swanson, and J. W. Renoos. 1985. Pentachlorophenol toxicity to amphipods and fathead minnows at different test pH values. *Environ. Toxicol. Chem.* 4:389-97 #305
- Spehar, R. L., S. Poucher, L. T. Brooke, D. J. Hansen, D. Champlin, and D. A. Cox. 1999. Comparative toxicity of fluoranthene to freshwater and saltwater species under fluorescent and ultraviolet light. *Arch. Environ. Contam. Toxicol.* 37:496-502 #721
- Spehar, R. L., D. K. Tanner, and B. R. Nordling. 1983. Toxicity of the synthetic pyrethroids, permethrin and AC 222, 705 and their accumulation in early life stages of fathead minnows and snails. *Aquat. Toxicol.* 3:171-82 #269
- Spehar, R. L., G. D. Veith, D. L. DeFoe, and B. V. Bergstedt. 1979. Toxicity and bioaccumulation of hexachlorocyclopentadiene, hexachloronorbornadiene, and heptachloronorbornene in larval and early juvenile fathead minnows, *Pimephales promelas*. *Bull. Environ. Contam. Toxicol.* 21:576-83 #193
- Spehar, R. 1989. Memo with lab results attached. Unpublished memo to colleague at UW-Superior. Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN . #1989-59
- Spehar, R.L. 1976. Cadmium and zinc toxicity to *Jordanella floridae*. EPA 600/3-76-096. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1976-10
- Spehar, R.L. 1986. Criteria document data, Sept. 16, 1986. Unpublished memo. Environmental

- Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1986-40
- Spehar, R.L., D.K. Tanner, and J.H. Gibson. 1982. Effects of kelthane and pydrin on early life stages of fathead minnows (*Pimephales promelas*) and amphipods (*Hyalella azteca*). In: *Aquatic toxicology and hazard assessment: Fifth conference*. J.G. Pearson, R.B. Foster, and W.E. Bishop, eds. Pp. 234-244. ASTM STP 766. American Society for Testing and Materials, Philadelphia, PA. #1982-18
- Spehar, R.L., G.D. Veith, and D.L. DeFoe. 1977. A rapid assessment of the toxicity of three organochlorine insecticide intermediates to fathead minnow. EPA 600/3-77/099. Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1977-20
- Spehar, R. L. Cadmium and zinc toxicity to *Jordanella floridae*. EPA 600/3-76/096. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Spehar, R. L. and Carlson, A. R. Derivation of site-specific water quality criteria for cadmium and the St. Louis River basin, Duluth, Minnesota. EPA 600/3-84-029. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB84-153196).
- Spehar, R. L. and Fiandt, J. T. Acute and chronic effects of water quality criteria based metal mixtures on three aquatic species. EPA 600/3-85-074. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB86-122579).
- Spehar, R. L.; Veith, G. D.; DeFoe, D. L., and Bergstedt, B. A. A rapid assessment of the toxicity of three chlorinated cyclodiene insecticide intermediates to fathead minnows. EPA 600/3-77/099. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Spoor, W. A. 1990. Distribution of fingerling brook trout, *Salvelinus fontinalis* (Mitchill), in dissolved oxygen concentration gradients. *J. Fish Biol.* 36:363-73 #432
- Spoor, W. A. 1977. Oxygen requirements of embryos and larvae of the largemouth bass, *Micropterus salmoides* (Lacepede). *J. Fish Biol.* 11:77-86 #162
- Spoor, W. A. 1984. Oxygen requirements of larvae of the smallmouth bass, *Micropterus dolomieu* Lacepede. *J. Fish Biol.* 25:587-92 #289
- Spoor, W. A. and R. A. Drummond. 1972. An electrode for detecting movement in gradient tanks. *Trans. Am. Fish. Soc.* 101:714-15 #76
- Spoor, W. A., T. W. Neiheisel, and R. A. Drummond. 1971. An electrode chamber for recording respiratory and other movements of free-swimming animals. *Trans. Am. Fish. Soc.* 100:22-28 #61
- Sridharan, N. and Lee, G. F. Algal nutrient availability and limitation in Lake Ontario during IFYGL. Part III: Algal nutrient limitation in Lake Ontario during IFYGL. EPA 600/3-77/046a. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # R-800537-02. Project officer: N. Thomas
- Stahl, R.G., Jr., J. Orme-Zavaleta, K. Austin, W. Berry, J.R. Clark, S. Cormier, W. Fisher, J. Garber, R. Hoke, L. Jackson, G. Kreamer, C. Muska, and M.E. Sierszen. 2000. Ecological indicators in risk assessment: workshop summary. *Human and Ecological Risk Assessment*, 6(4):671-677. #2000-6
- Stalling, D. L. and Huckings, J. N. Analysis and GC-MS characterization of toxaphene in fish and water. EPA 600/3-76/076. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # EPA-IAG-0153 (D). Project officer: L.H. Mueller
- Stay, F. S. and A. W. Jarvinen. 1995. Use of microcosm and fish toxicity data to select mesocosm treatment concentrations. *Arch. Environ. Contam. Toxicol.* 28:451-58 #585
- Stay, F. S., A. Katko, C. M. Rohm, M. A. Fix, and D. P. Larsen. 1989. The effects of atrazine on microcosms developed from four natural plankton communities. *Arch. Environ. Contam. Toxicol.* 18:866-75 #400
- Stay, F. S., A. Katko, C. M. Rohm, M. A. Fix, and D. P. Larsen. 1988. Effects of fluorene on microcosms developed from four natural communities. *Environ. Toxicol. Chem.* 7:635-44 #370
- Stay, F.S. 1980. Review of aquatic microcosm techniques used for hazard assessment of potentially toxic compounds. Corvallis Environmental Research Laboratory, U.S. Environmental Protection

- Agency, Corvallis, OR. #1980-3
- Stay, F.S., T.E. Flum, L.J. Shannon, and J.D. Yount. 1989. An assessment of the precision and accuracy of SAM and MFC microcosms exposed to toxicants. In: *Aquatic toxicology and hazard assessment, 12th vol.* U.M. Cowgill and L.R. Williams, eds. Pp. 189-203. ASTM STP 1027. American Society for Testing and Materials, Philadelphia, PA. #1989-36
- Stefan, H. G., X. Fang, D. Wright, J. G. Eaton, and J. H. McCormick. 1995. Simulation of dissolved oxygen profiles in a transparent, dimictic lake. *Limnol. Oceanogr.* 40:105-18 #586
- Stefan, H. G., M. Hondzo, J. G. Eaton, and J. H. McCormick. 1993. Comparison of actual fish observations with simulated suitable fish habitat in Minnesota lakes. #826
- Stefan, H. G., M. Hondzo, J. G. Eaton, and J. H. McCormick. 1995. Validation of a fish habitat model for lakes. *Ecol. Model.* 82:211-24 #587
- Stefan, H. G., M. Hondzo, X. Fang, J. G. Eaton, and H. J. McCormick. 1995. Simulated long-term temperature and dissolved oxygen characteristics of Minnesota lakes and resulting habitat limits for fishes. #828
- Stefan, H. G., M. Hondzo, X. Fang, J. G. Eaton, and J. H. McCormick. 1996. Simulated long-term temperature and dissolved oxygen characteristics of lakes in the north-central United States and associated fish habitat limits. *Limnol. Oceanogr.* 41:1124-35 #630
- Stefan, H. G., M. Hondzo, X. Fang, A. H. Rasmussen, J. G. Eaton, and J. H. McCormick. 1994. Year-round water temperature and dissolved oxygen simulation model for lakes with winter ice cover. #827
- Stefan, H.G. and X. Fang. 1995. A methodology to estimate year-round effects of climate change on water temperature, ice and dissolved oxygen characteristics of temperate zone lakes with application to Minnesota. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1995-26
- Stefan, H.G. and X. Fang. 1994. Model simulations of dissolved oxygen characteristics of Minnesota lakes: Past and future. *Environmental Management* 18(1):73-92. #1994-1
- Stefan, H.G., X. Fang, and J.G. Eaton. 2001. Simulated fish habitat changes in North American lakes in response to projected climate warming. *Trans. Am. Fish. Soc.*, 130:459-477. #2001-15
- Stefan, H.G., J. Gulliver, M.G. Hahn, and A.Y. Fu. 1980. Water temperature dynamics in experimental field channels: Analysis and modeling. Project Report No. 193, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, Minneapolis, MN. Prepared for Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1980-6
- Stefan, H.G., M. Hondzo, J.G. Eaton, and J.H. McCormick. 1995. Predicted effects of global climate change on fishes in Minnesota lakes. In: *Climate change and northern fish populations*. R.J. Beamish, ed. Pp. 57-72. Canadian Special Publications of Fisheries and Aquatic Sciences 121. National Research Council of Canada. #1995-9
- Stefan, H.G., M. Hondzo, and X. Fang. 1993. Lake water quality modeling for projected future climate scenarios. *Journal of Environmental Quality* 22(3):417-431. #1993-10
- Stefan, H.G. and E.B. Preud'homme. 1993. Stream temperature estimation from air temperature. *Water Resources Bulletin* 29(1):1-19. #1993-11
- Stefan, H.G. and B.A. Sinokrot. 1993. Projected global climate change impact on water temperatures in five north central U.S. streams. *Climatic Change* 24:353-381. #1993-1
- Stefanovic, D.L. and H.G. Stefan. 1997. Two-dimensional water quality model for unsteady advection-diffusion of nonconservative substances. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC and Environmental Research Laboratory, Office of Research and Development, Mid-Continent Ecology Division, U.S. Environmental Protection Agency, Duluth, MN. #1997-19
- Steffen, M., T.M. Sarkela, A.A. Gybina, T.W. Steele, N.J. Trasseth, D. Kuehl, and C. Giulivi. 2001. Metabolism of S-nitrosoglutathione in intact mitochondria. *Biochem. J.*, 356:395-402. #2001-4
- Steiert, J.G., J.J. Pignatello, and R.L. Crawford. 1987. Degradation of chlorinated phenols by a pentachlorophenol-degrading bacterium. *Applied and Environmental Microbiology* 53(5):907-910. #1987-31
- Stemberger, R. S.; Gannon, J. E., and Bricker, F. J. Spatial and seasonal structure of rotifer communities in Lake Huron. EPA 600/3-79/085. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803086 and # 803037. Project officer: N.A. Thomas

- Stephan, C. E., D. L. Spehar, T. H. Roush, G. L. Phipps, and Q. H. Pickering. 1986. Effects of pollution on freshwater organisms. *J. Water Pollut. Control Fed.* 58:645-71 #333
- Stephan, C.E. 1985. Are the "Guidelines for deriving numerical national water quality criteria for the protection of aquatic life and its uses" based on sound judgements? In: *Aquatic toxicology and hazard assessment: Seventh symposium*. R.D. Cardwell, R. Purdy, R.C. Bahner, eds. Pp. 515-526. ASTM STP 854. American Society for Testing and Materials, Philadelphia, PA. #1985-18
- Stephan, C.E. 1993. Derivation of proposed human health and wildlife bioaccumulation factors for the Great Lakes Initiative - Draft. Unpublished report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1993-22
- Stephan, C.E. 1982. Increasing the usefulness of acute toxicity tests. In: *Aquatic toxicology and hazard assessment: Fifth conference*. J.G. Pearson, R.B. Foster, and W.E. Bishop, eds. Pp. 69-81. ASTM STP 766. American Society for Testing and Materials, Philadelphia, PA. #1982-19
- Stephan, C.E. 1987. Manual of instructions for preparing aquatic life water quality criteria documents. Draft document. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1987-47
- Stephan, C.E. 1977. Methods for calculating an LC₅₀. In: *Aquatic toxicology and hazard evaluation*. F.L. Mayer and J.L. Hamelink, eds. Pp. 65-84. ASTM STP 634. American Society for Testing and Materials, Philadelphia, PA. #1977-6
- Stephan, C.E. 1986. Proposed goal of applied aquatic toxicology. In: *Aquatic toxicology and environmental fate, 9th vol.* T.M. Poston and R. Purdy, eds. Pp. 3-10. ASTM STP 921. American Society for Testing and Materials, Philadelphia, PA. #1986-30
- Stephan, C.E. 197? Statement of Charles E. Stephan (cadmium toxicity). Unpublished statement. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-20
- Stephan, C.E. 1989. Topics on expressing and predicting results of life-cycle tests. In: *Aquatic toxicology and environmental fate, 11th vol.* G.W. Suter, II and M.A. Lewis, eds. Pp. 263-272. ASTM STP 1007. American Society for Testing and Materials, Philadelphia, PA. #1989-33
- Stephan, C.E. 2002. Use of species sensitivity distributions in the derivation of water quality criteria for aquatic life by the U.S. Environmental Protection Agency. In: *Species Sensitivity Distributions in Ecotoxicology*. Posthuma, L., Suter, G.W., II and Traas, T.P., eds. pp. 211-220. Lewis Publishers, Boca Raton, FL . #2002-1
- Stephan, C.E., K.A. Busch, R. Smith, J. Burke, and R.W. Andrew. 19?? A computer program for calculating an LC50. Pre-publication copy. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #19??-3
- Stephan, C.E. and D.I. Mount. 1973. Use of toxicity tests with fish in water pollution control. In: *Biological methods for the assessment of water quality*. J. Cairns, Jr. and K.L. Dickson, eds. Pp. 164-177. ASTM STP 528. American Society for Testing and Materials, Philadelphia, PA. #1973-20
- Stephan, C.E., D.I. Mount, D.J. Hansen, J.H. Gentile, G.A. Chapman, and W.A. Brungs. 1985. Guidelines for deriving numerical national water quality criteria for the protection of aquatic organisms and their uses. Unpublished report. Environmental Research Laboratories, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN/Narragansett, RI/Corvallis, OR. #1985-31
- Stephan, C.E. and J.W. Rogers. 1985. Advantages of using regression analysis to calculate results of chronic toxicity tests. In: *Aquatic toxicology and hazard assessment: Eighth symposium*. R.C. Bahner and D.J. Hansen, eds. Pp. 328-338. ASTM STP 891. American Society for Testing and Materials, Philadelphia, PA. #1985-22
- Stephan, C.E. Guidelines for deriving site-specific sediment quality criteria for the protection of benthic organisms. EPA-822-R-93/017. Office of Water/Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC.
- Stephan, C.E. Interim guidance on determination and use of water-effect ratios for metals. EPA 823/B-94/001. Office of Water, Office of Science and Technology, U.S. Environmental Protection Agency, Washington, D.C. and Environmental Research Laboratories, Office of Research and Development, Duluth, MN/Narragansett, RI.
- Stoermer, E.F. 1993. Diatom studies under EMAP Great Lakes quality assurance project plan. Unpublished report. Large Lakes Research Station, Environmental Research Laboratory-Duluth, Office of Research and Development, U.S. Environmental Protection Agency, Grosse Ile, MI. #1993-26

- Stoermer, E.F. and N.A. Andresen. 1995. Diatom studies under EMAP Great Lakes. Unpublished report. Large Lakes Research Station, Environmental Research Laboratory-Duluth, Office of Research and Development, U.S. Environmental Protection Agency, Grosse Ile, MI. #1995-7
- Stoermer, E.F., R.G. Kreis, Jr., and N.A. Andresen. 1999. Checklist of diatoms from the Laurentian Great Lakes. II. *J. Great Lakes Res.*, 25(3):515-566. #1999-11
- Stoermer, E. F. Characteristics of benthic algal communities in the upper Great Lakes. EPA 600/3-80/073. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803037. Project officer: N.A. Thomas
- Stoermer, E. F. and Kreis, R. G., Jr. Phytoplankton composition and abundance in southern Lake Huron. EPA 600/3-80/061. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803086. Project officer: N. Thomas
- Stoermer, E. F.; Bowman, M. M.; Kingston, J. C., and Schaadel, A. L. Phytoplankton composition and abundance in Lake Ontario during IFYGL. EPA 660/3-75/004. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant # R-800605. Project officer: N.A. Thomas
- Strachan, W. M. J. and G. E. Glass. 1978. Organochlorine substances in Lake Superior. *J. Great Lakes Res.* 4:389-97 #184
- Stroud, R.K., G.R. Bouck, and A.V. Nebeker. 1975. Pathology of acute and chronic exposure of salmonid fishes to supersaturated water. In: *Chemistry and physics of aqueous gas solutions*. W.A. Adams, et al., eds. Pp. 435-449. The Electrochemical Society, Princeton, NJ. #1975-9
- Sundstrom, G., T. Sawyer, O. Hutzinger, and Safe S. 1986. In vitro bioassays for toxic polychlorinated azobenzenes. *Chemosphere* 15(9-12):2105-2107. #1986-17
- Swackhamer, D.L. and D.E. Armstrong. 1987. Distribution and characterization of PCBs in Lake Michigan water. *J. Great Lakes Res.* 13(1):24-36. #1987-22
- Swackhamer, D.L. and D.E. Armstrong. 1988. Horizontal and vertical distribution of PCBs in southern Lake Michigan sediments and the effect of Waukegan Harbor as a point source. *J. Great Lakes Res.* 14(3):277-290. #1988-6
- Swackhamer, D.L. and R.A. Hites. 1988. Occurrence and bioaccumulation of organochlorine compounds in fishes from Siskiwit Lake, Isle Royale, Lake Superior. *Environ. Sci. Technol.* 22(5):543-548. #1988-33
- Swain, W.R., M.D. Mullin, and J.C. Filkins. 1986. Long range transport of toxic organic contaminants to the North American Great Lakes. In: EPA 600/9-86/024. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens, GA. #1986-37
- Swain, W.R., R.M. Wilson, R.P. Neri, and G.S. Porter. 1975. Persistent organic and heavy metal residues in the near-shore fishery of western Lake Superior. Unpublished report to the Environmental Protection Agency and the International Joint Commission. #1975-14
- Swain, W.R and Shannon, V.R. Proceedings of the Second American-Soviet Symposium on the Use of Mathematical Models to Optimize Water Quality Management : Bloomfield Hills, Michigan, USA, August 27-30, 1979. EPA 600/9-80/033. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Swain, W. R. and Shannon, V. R. Proceedings of the Third USA-USSR Symposium on the Effects of Pollutants Upon Aquatic Ecosystems: Theoretical Aspects of Aquatic Toxicology, July 2-6, 1979, Borok, Jaroslavl Oblast, USSR. EPA 600/9-80/034. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Swartz, R. C., S. P. Ferraro, J. O. Lamberson, F. A. Cole, R. J. Ozretich, B. L. Boese, D. W. Schults, M. Behrenfeld, and G. T. Ankley. 1997. Photoactivation and toxicity of mixtures of polycyclic aromatic hydrocarbon compounds in marine sediment. *Environ. Toxicol. Chem.* 16:2151-57 #659
- Swenson, W. A., J. H. McCormick, T. D. Simonson, K. M. Jensen, and J. G. Eaton. 1989. Experimental acidification of Little Rock Lake (Wisconsin): Fish research approach and early responses. *Arch. Environ. Contam. Toxicol.* 18:167-74 #401
- Swenson, W.A. 197? Influence of advanced wastewater treatment on the fishery resource of Shagawa Lake, Ely, Minnesota. Unpublished report, Grant Number R-803673. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-24

- Swenson, W.A., W.P. Gobin, and T.D. Simonson. 1988. Calibrated mask-bar for underwater measurement of fish. North American Journal of Fisheries Management 8:382-385. #1988-15
- Swenson, W. A. Influence of turbidity on fish abundance in western Lake Superior. EPA 600/3-78/067. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802455. Project officer: J.H. McCormick
- Swenson, W. A. Influence of advanced wastewater treatment on the fishery resource of Shagawa Lake, Minnesota. EPA 600/3-80/036. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant # R803673. Project officer: P.D. Smith
- Swift, M.C., G.J. Niemi, and J.A. Perry. 1994. Predictive modeling and experimental design of lotic mesocosms. Final report to the Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1994-16
- Swift, M.C., N.H. Troelstrup, Jr., N.E. Detenbeck, and J.L. Foley. 1993. Large artificial streams in toxicological and ecological research. *Jrnl. N. Am. Benth. Soc.*, v. 12, no. 4, pp. 359-366. #1993-27
- Sydror, M. and Stortz, K. Sources and transports of coal in the Duluth-Superior harbor. EPA 600/3-80/007. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803952. Project officer: D.W. Kuehl
- Symonik, D.M., J.R. Coats, S.P. Bradbury, G.J. Atchison, and J.M. Clark. 1989. Effect of fenvalerate on metabolic ion dynamics in the fathead minnow (*Pimephales promelas*) and bluegill (*Lepomis macrochirus*). *Bull. Environ. Contam. Toxicol.* 42:821-828. #1989-41
- Syrett, R. F. and W. F. Dawson. 1972. An inexpensive electronic relay for precise water-temperature control. *Prog. Fish-Cult.* 34:241-42 #77
- Syrett, R. F. and W. F. Dawson. 1975. An inexpensive solid-state temperature controller. *Prog. Fish-Cult.* 37:171-72 #123
- T
- Tanis, F. J. A remote sensing technique to monitor Cladophora in the Great Lakes. EPA 600/3-80/075. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803611. Project officer: M.D. Mullin
- Tanner, D. K., J. C. Brazner, and V. J. Brady. 2000. Factors influencing carbon, nitrogen, and phosphorus content of fish from a Lake Superior coastal wetland. *Can. J. Fish. Aquat. Sci.* 57:1243-51 #739
- Tanner, D. K. and M. L. Knuth. 1995. Effects of azinphos-methyl on the reproductive success of the bluegill sunfish, *Lepomis macrochirus*, in littoral enclosures. *Ecotoxicol. Environ. Saf.* 32:184-93 #588
- Tanner, D. K. and M. L. Knuth. 1996. Effects of esfenvalerate on the reproductive success of the bluegill sunfish, *Lepomis macrochirus* in littoral enclosures. *Arch. Environ. Contam. Toxicol.* 31:244-51 #631
- Tanner, D. K., E. N. Leonard, and J. C. Brazner. 1999. Microwave digestion method for phosphorus determination of fish tissue. *Limnol. Oceanogr.* 44:708-9 #709
- Tanner, D. K. and M. F. Moffett. 1995. Effects of diflubenzuron on the reproductive success of the bluegill sunfish, *Lepomis macrochirus*. *Environ. Toxicol. Chem.* 14:1345-55 #589
- Tapper, M. A. and R. E. Hicks. 1998. Temperate viruses and lysogeny in Lake Superior bacterioplankton. *Limnol. Oceanogr.* 43:95-103 #681
- Tapper, M. A., B. R. Sheedy, D. E. Hammermeister, and P. K. Schmieder. 2000. Depletion of cellular protein thiols as an indicator of arylation in isolated trout hepatocytes exposed to 1,4-benzoquinone. *Toxicological Sciences*. 55:327-34 #738
- Taraldsen, J. E. and T. J. Norberg-King. 1990. New method for determining effluent toxicity using duckweed (*Lemna minor*). *Environ. Toxicol. Chem.* 9:761-67 #433
- Taraldsen, J. 198? Toxicity testing/TREs of oil treatter discharges in the Powder River basin, Wyoming. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #198?-5
- Tarzwell, C.M. 1972. An argument for the open ocean siting of coastal thermal electric plants. *J Environ Qual.* 1(1):89-91. #1972-13
- Tarzwell, C.M. 1968. The determination, use, and value of water quality requirements. Presented at the 29th Annual International Water Conference of the Engineers' Society of Western Pennsylvania, Nov. 19, 1968, Pittsburgh, PA. #1968-5

- Tarzwell, C.M. 1958. Disposal of toxic wastes. *Industrial Wastes*, 1958. #1958-1
- Tarzwell, C.M. 19?? Environmental management in marine waters. Unpublished paper of a Marine Pollution Panel Discussion. #19??-7
- Tarzwell, C.M. 1966. Maintaining water quality. *Transactions of the Thirty-First North American Wildlife and Natural Resources Conference*, March 14-16, 1966. #1966-4
- Tarzwell, C.M. 196? Pollutational effects of organic insecticides. Unpublished report. Robert A. Taft Sanitary Engineering Center, U.S. Public Health Service, Department of Health, Education, and Welfare, Cincinnati, OH. #196?-4
- Tetrick, N. and Joeres, E. Water constraints in power-plant siting and operation: Wisconsin power plant impact study. EPA 600/3-80/077. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803971. Project officer: G.E. Glass
- Thatcher, T. O. and J. F. Santner. 1967. Acute toxicity of LAS to various fish species. *Proc. 21st Ind. Waste Conf. Purdue Univ.* 50:996-1002 #14
- Theis, T.L., T.C. Young, and J.V. DePinto. 1988. Factors affecting metal partitioning during resuspension of sediments from the Detroit River. *J. Great Lakes Res.* 14(2):216-226. #1988-10
- Thomas, N. A. 1988. Use of biomonitoring to control toxics in the United States. *Water Sci. Technol.* 20:101-8 #371
- Thomann, R.V. 1981. Equilibrium model of fate of microcontaminants in diverse aquatic food chains. *Can. J. Fish. Aquat. Sci.* 38(3):280-296. #1981-13
- Thomann, R.V. and J.P. Connolly. 1984. An age-dependent model of PCB in a Lake Michigan food chain . EPA-600/S3-84-026. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1984-18
- Thomann, R.V. and J.P. Connolly. 1984. Model of PCB in the Lake Michigan lake trout food chain. *Environ. Sci. Technol.* 18(2):65-71. #1984-10
- Thomann, R.V., J.P. Connolly, and N.A. Thomas. 1987. The Great Lakes ecosystem- modeling of the fate of PCBs. EPA 600/D-87-325. Draft report. U.S. Environmental Protection Agency, Office of Research and Development, Environmental Research Laboratory, Duluth, MN. Also published as book chapter: PCBs in the Environment, 1986, J.S. Waid, ed., CRC Press. PB 88-124102. #1987-33
- Thomann, R. V. Size dependent model of hazardous substances in aquatic food chain. EPA 600/3-78/036. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB 281009): Contract # R803680.
- Thomann, R. V. and Connolly, J. P. An age dependent model of PCB in a Lake Michigan food chain. EPA 600/3-84-026. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB84-155993): CR 805916.
- Thomann, R. V.; Winfield, R. P.; Di Toro, D. M., and O'Connor, D. J. Mathematical modeling of phytoplankton in Lake Ontario. Part 2: Simulations using Lake 1 model. EPA 600/3-76/065. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R800610. Notes: Project officer: W. Richardson
- Thomann, R. V.; Winfield, R. P., and Segna, J. J. Verification analysis of Lake Ontario and Rochester embayment three dimensional eutrophication models. EPA 600/3-79-094. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803680. Project officer: W.L. Richardson
- Thomann, R. V.; DiToro, D. M.; Winfield, R. P., and O'Connor, D. J. Mathematical modeling of phytoplankton in Lake Ontario. 1. Model development and verification. EPA 660/3-75/005. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant # R-800610. Project officer: W. Richardson
- Thomas, N.A. 1994. EPA/ORD role and perspective in sediment research. In: *Transport and transformation of contaminants near the sediment-water interface*. J.V. DePinto, W. Lick, and J.F. Paul, eds. Pp. 7-15. Lewis Publishers, Boca Raton, FL. #1994-5
- Thomas, N.A. 1993. Use of biomonitoring to control toxics in the United States. In: EPA 600/R-93/157. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens, GA. #1993-25
- Thomas, N.A. and W.J. Christie, eds. 1972. Status of the biota of Lake Ontario during IFYGL.

- Unpublished report. International Field Year for the Great Lakes. #1972-6
- Thomas, N.A., J.O. Lamberson, and R.C. Swartz. 1992. Bulk sediment toxicity test approach. In: *Sediment classification methods compendium*. Pp. 3.1-3.10. EPA 823-R-92-006. U.S. Environmental Protection Agency, Washington, D.C. #1992-21
- Thompson, J. A. 1997. Cellular fluorescence capacity as an endpoint in algal toxicity testing. *Chemosphere*. 35:2027-37 #667
- Thompson, K.W., M.L. Deaton, R.V. Foutz, J. Cairns, Jr., and A.C. Hendricks. 1982. Application of time-series intervention analysis to fish ventilatory response data. *Can. J. Fish. Aquat. Sci.* 39:518-521. #1982-21
- Thompson, K.W., A.C. Hendricks, and J. Cairns, Jr. 1980. Acute toxicity of zinc and copper singly and in combination to the bluegill (*Lepomis macrochirus*). *Bull. Environm. Contam. Toxicol.* 25:122-129. #1980-19
- Thurston, R. V., T. A. Gilfoil, E. L. Meyn, R. K. Zajdel, T. I. Aoki, and G. D. Veith. 1985. Comparative toxicity of ten organic chemicals to ten common aquatic species. *Water Res.* 19:1145-55 #306
- Thurston, R. V., R. C. Russo, R. J. Luedtke, C. E. Smith, E. L. Meyn, C. Chakoumakos, K. C. Wang, and C. J. D. Brown. 1984. Chronic toxicity of ammonia to rainbow trout. *Trans. Am. Fish. Soc.* 113:56-73 #290
- Thurston, R.V. and P.C. Gehrke. 1993. Respiratory oxygen requirements of fishes: Description of OXYREF, a data file based on test results reported in the published literature. In: *Fish Physiology, Toxicology, and Water Quality Management, Proceedings of an International Symposium*, Sacramento, CA, Sept. 18-20, 1990. Pp. 95-108. #1993-7
- Thurston, R.V. and E.L. Meyn. 1987. Acute toxicity of ammonia to fishes of nine species from the Yellowstone River drainage, Montana. Technical Report No. 87-1. Fisheries Bioassay Laboratory, Montana State University, Bozeman, MT. #1987-43
- Thurston, R.V. and R.C. Russo. 1981. Acute toxicity of ammonia to golden trout (*Salmo aguabonita*) and mottled sculpin (*Cottus bairdi*). Technical Report No. 81-1. Fisheries Bioassay Laboratory, Montana State University, Bozeman, MT. #1981-9
- Thurston, R.V., R.C. Russo, and K. Emerson. 1974. Aqueous ammonia equilibrium calculations. Technical Report No. 74-1. Fisheries Bioassay Laboratory, Montana State University, Bozeman, MT. #1974-10
- Thurston, R. V.; Russo, R. C., and Emerson, K. Aqueous ammonia equilibrium - tabulation of percent un-ionized ammonia. EPA 600/3-79/091. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant no. R800861. Project officer: K.E.F. Hokanson
- Tietge, J. E., G. T. Ankley, D. L. DeFoe, G. W. Holcombe, and K. M. Jensen. 2000. Effects of water quality on development of *Xenopus laevis*: a frog embryo teratogenesis assay -- *Xenopus* assessment of surface water associated with malformations in native anurans. *Environ. Toxicol. Chem.* 19:2114-21 #741
- Tietge, J. E., S. A. Diamond, G. T. Ankley, D. L. DeFoe, G. W. Holcombe, K. M. Jensen, S. J. Degitz, G. E. Elonen, and E Hammer. 2001. Ambient solar UV radiation causes mortality in larvae of three species of *Rana* under controlled exposure conditions. *Photochemistry and Photobiology*. 74:261-68 #762
- Tietge, J. E., J. R. Hockett, and J. M. Evans. 1997. Major ion toxicity of six produced waters to three freshwater species: Application of ion toxicity models and TIE procedures. *Environ. Toxicol. Chem.* 16:2002-8 #656
- Tietge, J. E., R. D. Johnson, and H. L. Bergman. 1988. Morphometric changes in gill secondary lamellae of brook trout (*Salvelinus fontinalis*) after long-term exposure to acid and aluminum. *Can. J. Fish. Aquat. Sci.* 45:1643-48 #372
- Tietge, J. E., R. D. Johnson, K. M. Jensen, P. M. Cook, G. E. Elonen, J. D. Fernandez, G. W. Holcombe, D. B. Lothenbach, and J. W. Nichols. 1998. Reproductive toxicity and disposition of 2,3,7,8-tetrachlorodibenzo-p-dioxin in adult brook trout (*Salvelinus fontinalis*) following a dietary exposure. *Environ. Toxicol. Chem.* 17:2395-407 #690
- Tillitt, D. E., G. T. Ankley, and J. P. Giesy. 1989. Planar chlorinated hydrocarbons (PCHs) in colonial fish-eating waterbird eggs from the Great Lakes. *Mar. Environ. Res.* 28:505-8 #402
- Tillitt, D. E., G. T. Ankley, J. P. Giesy, J. P. Ludwig, H. Kurita-Matsuba, D. V. Weseloh, P. S. Ross, C. A. Bishop, L. Sileo, K. L. Stromborg, J. Larson, and T. J. Kubiak. 1992. Polychlorinated biphenyl

- residues and egg mortality in double-crested cormorants from the Great Lakes. *Environ. Toxicol. Chem.* 11:1281-88 #488
- Tillitt, D. E., G. T. Ankley, D. A. Verbrugge, J. P. Giesy, J. P. Ludwig, and T. J. Kubiak. 1991. H4IIE rat hepatoma cell bioassay-derived 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents in colonial fish-eating waterbird eggs from the Great Lakes. *Arch. Environ. Contam. Toxicol.* 21:91-101 #463
- Tillitt, D. E., J. P. Giesy, and G. T. Ankley. 1990. Characterization of the H4IIE rat hepatoma cell bioassay as a tool for assessing toxic potency of planar halogenated hydrocarbons in environmental samples. *Environ. Sci. Technol.* 25:87-92 #434
- Tillitt, D. E., T. J. Kubiak, G. T. Ankley, and J. P. Giesy. 1993. Dioxin-like potency in Forster's tern eggs from Green Bay, Lake Michigan, North America. *Chemosphere.* 26:2079-84 #517
- Trebitz, A. S., S. Carpenter, P. Cunningham, B. Johnson, R. Lillie, D. Marshall, T. Martin, R. Narf, T. Pellett, S. Stewart, C. Storlie, and J. Unmuth. 1997. A model of bluegill-largemouth bass interactions in relation to aquatic vegetation and its management. *Ecol. Modell.* 94:139-56 #644
- Trebitz, A. S., B. H. Hill, and F. H. McCormick. 2003. Sensitivity of indices of biotic integrity to simulated fish assemblage changes. *Environ. Manage.* 32:499-515 #807
- Trebitz, A. S., J. A. Morrice, and A. M. Cotter. 2002. Relative role of lake and tributary in hydrology of Lake Superior coastal wetlands. *J. Great Lakes Res.* 28:212-27 #772
- Trebitz, A. S. and N. Nibbelink. 1996. Effect of pattern of vegetation removal on growth of bluegill: A simple model. *Can. J. Fish. Aquat. Sci.* 53:1844-51 #632
- Trenham, P. C., W. D. Koenig, M. J. Mossman, S. L. Stark, and L. A. Jagger. 2003. Regional dynamics of wetland-breeding frogs and toads: turnover and synchrony. *Ecological Applications.* 13:1522-32 #808
- Trenham, P. C., H. B. Shaffer, W. D. Koenig, and M. R. Stromberg. 2000. Life history and demographic variation in the California tiger salamander (*Ambystoma californiense*). *Copeia.* 365-77 #736
- Trenham, P.C., W.D. Koenig, and H.B. Shaffer. 2001. Spatially autocorrelated demography and interpond dispersal in the salamander *Ambystoma californiense*. *Ecology,* 82(12):3519-3530. #2001-12
- Trenham, P.C. and H.B. Shaffer. 1998. Biochemical identification and assessment of population subdivision in morphologically similar native and invading smelt species (*Hypomesus*) in the Sacramento-San Joaquin estuary, California. *Trans. Am. Fish. Soc.*, 127:417-424. #1998-13
- Trenham, P. C.; Diamond, S. A.; Detenbeck, N. E., and Ankley, G. T. PRIMENet : Ultraviolet radiation/amphibian populations research planning workshop, February 1-3, 1999. EPA 600/R-99/066. National Health and Environmental Effects Laboratory, Mid-Continent Division, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Tsai, C.H., S. Iacobellis, and W. Lick. 1987. Flocculation of fine-grained lake sediments due to a uniform shear stress. *J. Great Lakes Res.* 13(2):135-146. #1987-19
- Tsai, C.H. and W. Lick. 1986. A portable device for measuring sediment resuspension. *J. Great Lakes Res.* 12(4):314-321. #1986-13
- Tucker, J. H.; Cook, P. M.; Phipps, G. L.; Stokes, G. N., and Lima, P. H. Asbestos : a bibliography. EPA 600/3-78/066. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Turbak, S. C.; Olson, G. J., and McFeters, G. A. Environmental effects of western coal surface mining. Part IV - Chemical and microbiological investigations of a surface coal mine settling pond. EPA 600/3-79/125. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803950.
- Tye, R., R. Jepsen, and W. Lick. 1996. Effects of colloids, flocculation, particle size, and organic matter on the adsorption of hexachlorobenzene to sediments. *Environ. Toxicol. Chem.*, 15(5):643-651. #1996-20
- U
- Ullman, W.J. and R.C. Aller. 1989. Nutrient release rates from the sediments of Saginaw Bay, Lake Huron. *Hydrobiologia* 171(2):127-140. #1989-8
- U.S. Environmental Protection Agency. 1978. In-depth studies on health and environmental impacts of selected water pollutants. Performed by E G & G, Bionomics, Wareham, MA for the Criteria Branch, U.S. Environmental Protection Agency, Washington, D.C. #1978-4
- U.S. Environmental Protection Agency. 1977. Rapid methods research highlights. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1977-1

- U.S. Environmental Protection Agency. 1972. Recommended bioassay procedure for bluegill *Lepomis macrochirus* (Rafinesque) partial chronic tests. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1972-8
- U.S. Environmental Protection Agency. 1972. Recommended bioassay procedure for brook trout *Salvelinus fontinalis* (Mitchill) partial chronic tests. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1972-2
- U.S. Environmental Protection Agency. 1972. Recommended bioassay procedure for fathead minnow *Pimephales promelas* Rafinesque chronic tests. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1972-3
- U.S. Environmental Protection Agency. 197? Recommended bioassay procedure for *Jordanella floridae* (Goode and Bean) chronic tests. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-2
- U.S. Environmental Protection Agency. 1974. Recommended zinc and copper criteria for aquatic life in Ohio. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1974-8
- U.S. Environmental Protection Agency. 196? The search. Booklet describing work at the National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #196?-2
- U.S. Environmental Protection Agency. 1971. Tentative plans for the design and operation of a fathead minnow stock culture unit. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1971-9
- U.S. Environmental Protection Agency (USA) and Soviet Academy of Sciences (USSR). Proceedings of the First and Second USA-USSR Symposia on the Effects of Pollutants Upon Aquatic Ecosystems. Volume I. Duluth, Minnesota, USA Symposium, October 21-23, 1975. Volume II. Borok, Jaroslavl Oblast, USSR Symposium, June 22-26, 1976. EPA 600/3-78/076. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- U.S. Environmental Protection Agency, et al. 1990. Lake Ontario TCDD bioaccumulation study, final report and appendices (2 volumes). Unpublished report. U.S. Environmental Protection Agency, New York State Department of Environmental Conservation, New York State Department of Health, and Occidental Chemical Corporation. #1990-18
- U.S. EPA. 1972. A summary of the U.S. chemical and biological program for the International Field Year for the Great Lakes. Working Report No. 5. Grosse Ile Laboratory, Office of Research and Monitoring, U.S. Environmental Protection Agency, Grosse Ile, MI. #1972-11
- U.S. EPA and Environmental Research Laboratory Duluth. 1994. Environmental monitoring and assessment program (EMAP) for the Great Lakes: Quality Assurance FY94 Annual Report and FY95 Workplan. Environmental Monitoring and Assessment Program (EMAP) for the Great Lakes. #1994-18

V

- Vaishnav, D. D. and R. L. Anderson. 1995. Uptake and loss of *Bacillus thuringiensis* var. *israelensis* by *Daphnia magna* in laboratory exposure. *Environ. Toxicol. Chem.* 14:763-66 #590
- Vaishnav, D.D. 1986. Chemical structure-biodegradation inhibition and fish acute toxicity relationships for narcotic industrial chemicals. *Toxicity Assessment: An International Quarterly* 1(2):227-240. #1986-5
- Vaishnav, D.D. and L. Babeu. 1987. Comparison of occurrence and rates of chemical biodegradation in natural waters. *Bulletin of Environmental Contamination and Toxicology* 39:237-244. #1987-8
- Vaishnav, D.D. and L. Babeu. 1986. Occurrence and rates of chemical biodegradation in Superior Harbor water. *J. Great Lakes Res.* 12(3):184-191. #1986-6
- Vaishnav, D.D., L. Babeu, and E.T. Korthals. 1989. Effect of microbial concentration on biodegradation rates of phenols. *Journal of Industrial Microbiology* 4:307-314. #1989-6
- Vaishnav, D.D., R.S. Boethling, and L. Babeu. 1987. Quantitative structure-biodegradability relationships for alcohols, ketones and alicyclic compounds. *Chemosphere* 16(4):695-703. #1987-10
- Vaishnav, D.D., L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals. 1988. Protocol for a chronic test with the cladoceran, *Ceriodaphnia dubia*, exposed to bacteria used as pest control agents. In: *Development and validation of single species test protocols for pesticidal and non-pesticidal microbes*. D.D. Vaishnav, L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals.

- Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-57
- Vaishnav, D.D., L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals. 1988. Protocol for an acute toxicity test with cyclopoid copepods exposed to bacteria used as pest control agents. In: Development and validation of single species test protocols for pesticidal and non-pesticidal microbes. D.D. Vaishnav, L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-57
- Vaishnav, D.D., L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals. 1988. Protocol for an acute toxicity test with the cladoceran (*Ceriodaphnia dubia*) exposed to bacteria used as pest control agents. In: Development and validation of single species test protocols for pesticidal and non-pesticidal microbes. D.D. Vaishnav, L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-57
- Vaishnav, D.D., L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals. 1988. Protocol for an acute toxicity test with the cladocerans (*Daphnia magna* and *Daphnia pulex*) exposed to bacteria used as pest control agents. In: Development and validation of single species test protocols for pesticidal and non-pesticidal microbes. D.D. Vaishnav, L.T. Brooke, S.H. Poirier, D.J. McCauley, and E.T. Korthals. Unpublished report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1988-57
- Vaishnav, D.D. and E.T. Korthals. 1990. Comparative toxicities of selected industrial chemicals to microorganisms and other aquatic organisms. *Arch. Environ. Contam. Toxicol.* 19:624-628. #1990-16
- Vaishnav, D.D. and E.T. Korthals. 1988. Comparison of chemical biodegradation rates in BOD dilution and natural waters. *Bulletin of Environmental Contamination and Toxicology* 41:291-298. #1988-7
- Vaishnav, D.D. and D.M. Lopas. 1985. Relationship between lipophilicity and biodegradation inhibition of selected industrial chemicals. *Developments in Industrial Microbiology* 26:557-565?? #1985-2
- Van den Bera, M., L. Birnbaum, A.T.C. Bosveld, B. Brunstrom, P. Cook, M. Feeley, J.P. Giesy, A. Hanberg, R. Hasegawa, S.W. Kennedy, T. Kubiak, J.C. Larsen, F.X.R. van Leeuwen, A.K.D. Liem, C. Nolt, R.E. Peterson, L. Poellinger, S. Safe, D. Schrenk, D. Tillit, M. Tysklind, M. Younes, F. Waern, and T. Zacharewski. 1998. Toxic equivalency factors (TEFs) for PCBs, PCDDs, PCDFs for humans and wildlife. *Environ. Health Perspect.*, 106(12):775-792. #1998-10
- van der Schalie, H. and Berry, E. G. Effects of temperature on growth and reproduction of aquatic snails. EPA R3-73-021. Office of Research and Monitoring, U.S. Environmental Protection Agency, Washington, D.C., Contract # 14-12-441 Project 18050 FOG. Project officer: D.I. Mount
- Veith, G. D. 1975. Baseline concentrations of polychlorinated biphenyls and DDT in Lake Michigan fish, 1971. *Pestic. Monit. J.* 9:21-29 #124
- Veith, G. D. 1972. Recent fluctuations of chlorobiphenyls (PCBs) in the Green Bay, Wisconsin, region. *Environ. Health Perspect.* 1:51-54 #78
- Veith, G. D., N. M. Austin, and R. T. Morris. 1979. A rapid method for estimating log *P* for organic chemicals. *Water Res.* 13:43-47 #194
- Veith, G. D. and S. J. Broderius. 1990. Rules for distinguishing toxicants that cause type I and type II narcosis syndromes. *Environ. Health Perspect.* 87:207-11 #435
- Veith, G. D., D. J. Call, and L. T. Brooke. 1983. Structure-toxicity relationships for the fathead minnow, *Pimephales promelas*: Narcotic industrial chemicals. *Can. J. Fish. Aquat. Sci.* 40:743-48 #270
- Veith, G. D. and V. M. Comstock. 1975. Apparatus for continuously saturating water with hydrophobic organic chemicals. *J. Fish. Res. Board Can.* 32:1849-51 #125
- Veith, G. D., D. L. DeFoe, and B. V. Bergstedt. 1979. Measuring and estimating the bioconcentration factor of chemicals in fish. *J. Fish. Res. Board Can.* 36:1040-1048 #195
- Veith, G. D., D. L. DeFoe, and M. L. Knuth. 1985. Structure-activity relationships for screening organic chemicals for potential ecotoxicity effects. *Drug Metab. Rev.* 15:1295-303 #307
- Veith, G. D., B. E. Greenwood, R. S. Hunter, G. J. Niemi, and R. R. Regal. 1988. On the intrinsic dimensionality of chemical structure space. *Chemosphere.* 17:1617-30 #373
- Veith, G. D. and L. M. Kiwus. 1977. Exhaustive steam-distillation and solvent-extraction unit for pesticides and industrial chemicals. *Bull. Environ. Contam. Toxicol.* 17:631-36 #163

- Veith, G. D. and D. W. Kuehl. 1981. Automated gel-permeation system for removal of lipids in gas chromatography/mass spectrometric analysis of fatty tissues for xenobiotic chemicals. *Anal. Chem.* 53:1132-33 #229
- Veith, G. D., D. W. Kuehl, E. N. Leonard, F. A. Puglisi, and A. E. Lemke. 1979. Fish, wildlife, and estuaries: Polychlorinated biphenyls and other organic chemical residues in fish from major watershed in the United States, 1976. *Pestic. Monit. J.* 13:1-11 #196
- Veith, G. D., D. W. Kuehl, E. N. Leonard, K. J. Welch, and G. Pratt. 1981. Fish, wildlife, and estuaries: Polychlorinated biphenyls and other organic chemical residues in fish from major United States watersheds near the Great Lakes, 1978. *Pestic. Monit. J.* 15:1-8 #230
- Veith, G. D., D. W. Kuehl, F. A. Puglisi, G. E. Glass, and J. G. Eaton. 1977. Residues of PCBs and DDT in the western Lake Superior ecosystem. *Arch. Environ. Contam. Toxicol.* 5:487-99 #164
- Veith, G. D., D. W. Kuehl, and J. Rosenthal. 1975. Preparative method for gas chromatographic/mass spectral analysis of trace quantities of pesticides in fish tissue. *J. Assoc. Off. Anal. Chem.* 58:1-5 #126
- Veith, G. D., R. L. Lipnick, and C. L. Russom. 1989. The toxicity of acetylenic alcohols to the fathead minnow, *Pimephales promelas*: Narcosis and proelectrophile activation. *Xenobiotica*. 19:555-65 #403
- Veith, G. D. and O. G. Mekenyan. 1993. A QSAR approach for estimating the aquatic toxicity of soft electrophiles [QSAR for soft electrophiles]. *Quant. Struct.-Act. Relat.* 12:349-56 #518
- Veith, G. D., O. G. Mekenyan, G. T. Ankley, and D. J. Call. 1995. A QSAR analysis of substituent effects on the photoinduced toxicity of PAHs. *Chemosphere*. 30:2129-42 #591
- Veith, G. D., O. G. Mekenyan, G. T. Ankley, and D. J. Call. 1995. QSAR evaluation of α -terthienyl phototoxicity. *Environ. Sci. & Technol.* 29:1267-72 #592
- Veith, G.D. 1980. Bioconcentration tests for effluents. In: *Proceedings of the Seminar on Biological Monitoring and its Use in the NPDES Permit Program*, October 2, 1979, Chicago, IL. EPA 600/9-80-026. Center for Environmental Research Information, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, OH. Pp. 40-46. #1980-9
- Veith, G.D. 1973. Chlorinated hydrocarbons in fish from Lake Michigan. Unpublished report. Water Quality Office, U.S. Environmental Protection Agency. #1973-15
- Veith, G.D. 1998. Contaminated sediments: state of the science and future research directions. In: EPA 823/R-98/002. Office of Water, U.S. Environmental Protection Agency, Washington, DC. #1998-11
- Veith, G.D. 1972. PCBs in the Black and Cuyahoga Rivers. Unpublished report. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1972-5
- Veith, G.D. 1990. Report on methods to compute reactivity parameters for electrophilic chemicals. Internal report. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN. #1990-27
- Veith, G.D. 1989. Unified QSAR strategy for predictive ecotoxicology and initial environmental risk assessment. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-42
- Veith, G.D. and N.M. Austin. 1976. Detection and isolation of bioaccumulable chemicals in complex effluents. In: *Identification and Analysis of Organic Pollutants in Water*. Keith, L.A., ed., pp. 297-304. Ann Arbor Science, Ann Arbor, MI. #1976-17
- Veith, G.D. and S.J. Broderius. 1987. Structure-toxicity relationships for industrial chemicals causing type (II) narcosis syndrome. In: *QSAR in environmental toxicology - II*. K.L.E. Kaiser, ed. Pp. 385-391. D. Reidel Publishing Co., Dordrecht, Netherlands. #1987-36
- Veith, G.D., D.J. Call, and L.T. Brooke. 1983. Estimating the acute toxicity of narcotic industrial chemicals to fathead minnows. In: *Aquatic toxicology and hazard assessment: Sixth symposium*. W.E. Bishop, R.D. Cardwell, and B.B. Heidolph, eds. Pp. 90-97. ASTM STP 802. American Society for Testing and Materials, Philadelphia, PA. #1983-11
- Veith, G.D. and P.A. Kosian. 1983. Estimating bioconcentration potential from octanol/water partition coefficients. In: *Physical behavior of PCBs in the Great Lakes*. D. MacKay, S. Paterson, S.J. Eisenreich, and M.S. Simmons, eds. Pp. 269-282. Ann Arbor Science, Ann Arbor, MI. #1983-14
- Veith, G.D., D.W. Kuehl, and G.E. Glass. 197? Hazardous synthetic organic compounds in Lake Michigan fish. Unpublished presentation. National Water Quality Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #197?-19

- Veith, G.D., D.W. Kuehl, and J. Rosenthal. 1975. GC/MS analysis of pesticides in biological tissue at concentrations less than 0.1 ug/gm. Unpublished draft. #1975-13
- Veith, G.D. and G.F. Lee. 1971. Chlorobiphenyls (PCBs) in the Milwaukee River. *Water Res.*, 5:1107-1115. #1971-11
- Veith, G.D. and G.F. Lee. 1970. A review of chlorinated biphenyl contamination in natural waters. *Water Research*, 4:265-269. #1970-15
- Veith, G.D. and G.F. Lee. 1971. Water chemistry of toxaphene -- role of lake sediments. *Environ. Science Tech.*, 5:230-234. #1971-12
- Veith, G.D., K.J. Macek, S.R. Petrocelli, and J. Carroll. 1980. An evaluation of using partition coefficients and water solubility to estimate bioconcentration factors for organic chemicals in fish. In: *Aquatic toxicology*. J.G. Eaton, P.R. Parrish, and A.C. Hendricks, eds. Pp. 116-129. ASTM STP 707. American Society for Testing and Materials, Philadelphia, PA. #1980-18
- Veith, G. D. State-of-the-art report on structure-activity methods development. EPA 600/3-81-029. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB81-187239).
- Veith, G. D. and Morris, R. T. A rapid method for estimating Log P for organic chemicals. EPA 600/3-78/049. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Velleux, M. and D. Endicott. 1994. Development of a mass balance model for estimating PCB export from the lower Fox River to Green Bay. *J. Great Lakes Res.* 20(2):416-434. #1994-2
- Velleux, M., D. Endicott, J. Steuer, S. Jaeger, and D. Patterson. 1995. Long-term simulation of PCB export from the Fox River to Green Bay. *J. Great Lakes Res.* 21(3):359-372. #1995-5
- Velleux, M., J. Gailani, and D. Endicott. 1996. Screening-level approach for estimating contaminant export from tributaries. *J. Environ. Eng.* 122(6):503-514. #1996-2
- Velleux, M.L., D.D. Endicott, and W.L. Richardson. 1988. Confined disposal facility far-field modeling project report: An application to Saginaw Bay. Internal report. Large Lakes Research Station, U.S. Environmental Protection Agency, Grosse Ile, MI. #1988-51
- Velleux, M.L., J.E. Rathbun, R.G. Kreis, Jr., J.L. Martin, M.J. Mac, and M.L. Tuchman. 1993. Investigation of contaminant transport from the Saginaw confined disposal facility. *J. Great Lakes Res.* 19(1):158-174. #1993-5
- Vellux, M.; Westenbroek, S.; Ruppel, J.; Settles, M., and Endicott, D. A user's guide to IPX, the in-place pollutant export water quality modeling framework. EPA 600/R-01/074. Large Lakes Research Station, Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Grosse Ile, MI.
- Verbrugge, D.A., J.P. Giesy, M.A. Mora, L.L. Williams, R. Rossmann, R.A. Moll, and M. Tuchman. 1995. Concentrations of dissolved and particulate polychlorinated biphenyls in water from the Saginaw River, Michigan. *J. Great Lakes Res.* 21(2):219-233. #1995-10
- Vick, N., compiler. 1977. Freshwater findings, 1967-1976: Research publications of the Environmental Research Laboratory, Duluth, Minnesota. EPA 600/9-77-005. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth. #1977-4
- W
- Wackernagel, M. and J. D. Yount. 1998. The ecological footprint: an indicator of progress toward regional sustainability. *Environ. Monit. Assess.* 51:511-29 #678
- Wackernagel, M. and J. D. Yount. 2000. Footprints for sustainability: the next steps. *Environ. Develop. Sustain.* 2:21-42 #748
- Walbridge, C. T., J. T. Fiandt, G. L. Phipps, and G. W. Holcombe. 1983. Acute toxicity of ten chlorinated aliphatic hydrocarbons to the fathead minnow (*Pimephales promelas*). *Arch. Environ. Contam. Toxicol.* 12:661-66 #271
- Walbridge, C. T. A flow-through testing procedure with duckweed (*Lemna minor L.*). EPA 600/3-77/108. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN.
- Walker, M. K., P. M. Cook, A. R. Batterman, B. C. Butterworth, C. Berini, J. J. Libal, L. C. Hufnagle, and R. E. Peterson. 1994. Translocation of 2,3,7,8-tetrachlorodibenzo-p-dioxin from adult female trout (*Salvelinus namaycush*) to oocytes: Effects on early life stage development and sac fry survival. *Can. J. Fish. Aquat. Sci.* 51:1410-1419 #550

- Walker, M. K., P. M. Cook, B. C. Butterworth, E. W. Zabel, and R. E. Peterson. 1996. Potency of a complex mixture of polychlorinated dibenzo-*p*-dioxin, dibenzofuran, and biphenyl congeners compared to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in causing fish early life stage mortality. *Fundam. Appl. Toxicol.* 30:178-86 #633
- Wallace, K.B. 1989. Glutathione-dependent metabolism in fish and rodents. *Environmental Toxicology and Chemistry* 8:1049-1055. #1989-26
- Wallace, K.B. and U. Herzberg. 1988. Reactivation and aging of phosphorylated brain acetylcholinesterase from fish and rodents. *Toxicology and Applied Waybrant*, R. C. and Shauver, J. M. Survey of larval fish in the Michigan waters of Lake Erie, 1975 and 1976. EPA 600/3-79/095. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Contract # R804522. Notes: Project officer: N.A. Thomas d Pharmacology 92:307-314. #1988-27
- Wallace, K.B. and J.R. Kemp. 1991. Species specificity in the chemical mechanisms of organophosphorus anticholinesterase activity. *Chem. Res. Toxic.* 4:41-49. #1991-16
- Wallace, K.B. and G.J. Niemi. 1988. Structure-activity relationships of species-selectivity in acute chemical toxicity between fish and rodents. *Environ. Toxicol. Chem.* 7:201-212. #1988-14
- Wallace, K.B. and G.J. Niemi. 1988. Structure-activity relationships of species-selectivity in acute chemical toxicity between fish and rodents. *Environmental Toxicology and Chemistry* 7:201-212. #1988-32
- Warnick, S. L. and H. L. Bell. 1969. The acute toxicity of some heavy metals to different species of aquatic insects. *J. Water Pollut. Control Fed.* 41:280-284 #35
- Warren, C. E. and Liss, W. J. Design and evaluation of laboratory ecological system studies. EPA 600/3-77/022. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB 280 051): Grant # R802286. Project officer: J. Eaton
- Water quality criteria research of the U.S. Environmental Protection Agency. Proceedings of an EPA-sponsored Symposium on Marine, Estuarine and Fresh Water Quality, presented at the 26th annual meeting of the AIBS, August, 1975. EPA 600/3-76/079. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR.
- Watras, C.J. and A.L. Baker. 1988. Detection of planktonic cyanobacteria by tandem *in vivo* fluorometry. *Hydrobiologia* 169:77-84. #1988-34
- Watras, C.J. and T.M. Frost. 1989. Little Rock Lake (Wisconsin): Perspectives on an experimental ecosystem approach to seepage lake acidification. *Arch. Environ. Contam. Toxicol.* 18:157-165. #1989-29
- Weber, T. W. II. Response of phytoplankton to acidification in experimental streams. EPA 600/3-81/042. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB81-216822).
- Webster, K.E., J.M. Eilers, J.G. Wiener, G.E. Glass, P.J. Garrison, and M.D. Johnson. 1993. Chemical and biotic characteristics of two low-alkalinity lakes in northern Wisconsin: Relation to atmospheric deposition. Technical Bulletin No. 184. Department of Natural Resources, Madison, WI. #1993-6
- Webster, K.E., T.M. Frost, C.J. Watras, W.A. Swenson, M. Gonzalez, and P.J. Garrison. 1992. Complex biological responses to the experimental acidification of Little Rock Lake, Wisconsin, USA. *Environmental Pollution* 78:73-78. #1992-7
- Webster, K. E.; Forbes, A. M., and Magnuson, J. J. An evaluation of environmental stress imposed by a coal ash effluent: Wisconsin Power Plant Impact Study. EPA 600/3-85-045. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB85-213429): Grant # R803971.
- Welch, K. J., D. W. Kuehl, E. N. Leonard, G. D. Veith, and N. D. Schoenthal. 1981. Background hydrocarbon residues in fishes from the Great Lakes and eastern Montana. *Bull. Environ. Contam. Toxicol.* 26:724-28 #231
- West, C. W. and G. T. Ankley. 1998. A laboratory assay to assess avoidance of contaminated sediments by the freshwater oligochaete *Lumbriculus variegatus*. *Arch. Environ. Contam. Toxicol.* 35:20-24 #680
- West, C. W., G. T. Ankley, J. W. Nichols, G. E. Elonen, and D. E. Nessa. 1997. Toxicity and

- bioaccumulation of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in long-term tests with the freshwater benthic invertebrates *Chironomus tentans* and *Lumbriculus variegatus*. *Environ. Toxicol. Chem.* 16:1287-94 #648
- West, C. W., P. A. Kosian, D. R. Mount, E. A. Makynen, M. S. Pasha, P. K. Sibley, and G. T. Ankley. 2001. Amendment of sediments with a carbonaceous resin reduces bioavailability of polycyclic aromatic hydrocarbons. *Environ. Toxicol. Chem.* 20:1104-11 #758
- West, C. W., V. R. Mattson, E. N. Leonard, G. L. Phipps, and G. T. Ankley. 1993. Comparison of the relative sensitivity of three benthic invertebrates to copper-contaminated sediments from the Keweenaw Waterway. *Hydrobiologia*. 262:57-63 #519
- West, C. W., G. L. Phipps, R. A. Hoke, T. A. Goldenstein, F. M. VanderMeiden, P. A. Kosian, and G. T. Ankley. 1994. Sediment core versus grab samples: Evaluation of contamination and toxicity at a DDT-contaminated site. *Ecotoxicol. Environ. Saf.* 28:208-20 #551
- West, C.W., K.N. Allen, S.F. Hettke, and J.W. Arthur. 1985. Environmental influence on the acute toxicity of ammonia to 14 freshwater species. Unpublished report. Monticello Ecological Research Station, U.S. Environmental Protection Agency, Monticello, MN. #1985-8
- West, D.E. and H.G. Stefan. 1999. Modeling of watershed input and potential climate change effects on water quality in agricultural reservoirs in the Little Washita River Watershed. Grazing Lands Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, El Reno, OK. #1999-23
- West, D.E. and H.G. Stefan. 1998. Simulation of lake water quality using a one-dimensional model with watershed input: model description and application to Lake Riley and Lake Elmo. Grazing Land Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, El Reno, OK. #1998-18
- Wezernak, C. T. and Lyzenga, D. R. Satellite remote sensing study of the trans-boundary movement of pollutants. EPA 600/3-77/056. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R803671. Project officer: M.D. Mullin
- Wezernak, C. T.; Lyzenga, D. R., and Polcyn, F. C. *Cladophora* distribution in Lake Ontario (IFYGL). EPA 660/3-74-028. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, Corvallis, OR, Grant no. 800778, Program Element # 1EA487. Project officer: M.D. Mullin
- White, D.S., J. Bowers, D. Jude, R. Moll, S. Hendricks, P. Mansfield, and M. Flexner. 1988. The condition of organisms passing through the Detroit River from Lake St. Clair to Lake Erie (Appendix N). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. R.G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix N. #1988-4
- White, D.S., J. Bowers, D. Jude, R. Moll, S. Hendricks, P. Mansfield, and M. Flexner. 1988. Exposure and biological effects of in-place pollutants (Appendix K). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. R.G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix K. #1988-4
- White, D.S. and T.J. Keilty. 1988. Burrowing avoidance assays of contaminated Detroit River sediments using the freshwater oligochaete *Stylodrilus heringianus* (Lumbriculidae) (Appendix M). In: Final report to the Upper Great Lakes Connecting Channels Study Activities Workgroups for Tasks in Activities C, G, and H. Integrated study of exposure and biological effects of in-place sediment pollutants in the upper connecting channels: Interim results. Russell G. Kreis, Jr., ed. Unpublished report. U.S. Environmental Protection Agency, Environmental Research Laboratory, Duluth, MN and Large Lakes Research Station, Grosse Ile, MI. Appendix M. #1988-4
- Whiteman, F. W., G. T. Ankley, M. D. Kahl, D. M. Rau, and M. D. Balcer. 1996. Evaluation of interstitial water as a route of exposure for ammonia in sediment tests with benthic macroinvertebrates. *Environ. Toxicol. Chem.* 15:794-801 #634

- Whitford, F., M. Mayes, D. Urban, J. Wolt, R. Bennett, R. Turco, M. Jones, B.K. Miller, and L. Bledsoe. 2002. Ecological risk assessments: evaluating pesticide risks to nontarget species. In: *The Complete Book of Pesticide Management*. F. Whitford, pp. 140-195, John Wiley & Sons, New York, NY. #2002-7
- Wiener, J. G., R. E. Martini, T. B. Sheffy, and G. E. Glass. 1990. Factors influencing mercury concentrations in walleyes in northern Wisconsin lakes. *Trans. Am. Fish. Soc.* 119:862-70 #436
- Wiener, J.G., P.J. Rago, and J.M. Eilers. 1984. Species composition of fish communities in northern Wisconsin lakes: Relation to pH. In: *Early biotic responses to advancing lake acidification*. Hendrey, G.R., ed. Butterworth Publishers, Boston, MA. Pp. 133-146. #1984-7
- Williams, L. L., J. P. Giesy, N. DeGalan, D. A. Verbrugge, D. E. Tillitt, G. T. Ankley, and R. L. Welch. 1992. Prediction of concentrations of 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents from total concentrations of polychlorinated biphenyls in fish fillets. *Environ. Sci. Technol.* 26:1151-59 #489
- Williamson, K. J. and Nelson, P. O. Bacterial bioassay for Level I toxicity assessment. EPA 600/3-83-017. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, (PB83-182287): Grant # R806297.
- Winnell, M.H. and D.S. White. 1986. The distribution of *Heterotrissocladius oliveri* Saether (Diptera: Chironomidae) in Lake Michigan. *Hydrobiologia* 131:205-214. #1986-22
- Winner, R.W. 1989. Multigeneration life-span tests of the nutritional adequacy of several diets and culture waters for *Ceriodaphnia dubia*. *Environ. Toxicol. Chem.* 8:513-520. #1989-16
- Winner, R.W., T. Keeling, R. Yeager, and M.P. Farrell. 1977. Effect of food type on the acute and chronic toxicity of copper to *Daphnia magna*. *Freshwater Biology* 7:343-349. #1977-13
- Winner, R. W. Toxicity of copper to daphnids in reconstituted and natural waters. EPA 600/3-76/051. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, Grant # R802210. Notes: Project officer: T.W. Neiheisel
- Wood, C.M., W.J. Adams, G.T. Ankley, D.R. DiBona, S.N. Luoma, R.C. Playle, W.A. Stubblefield, H.L. Bergman, R.J. Erickson, J.S. Mattice, and C.E. Schlekat. 1997. Environmental toxicology of metals. In: *Reassessment of metals criteria for aquatic life protection: Priorities for research and implementation*. H.L. Bergman and E.J. Dorward-King, eds. Pp. 31-56. SETAC Press, Pensacola, FL. #1997-1
- Wrenn, W. B.; Armitage, B. J.; Rodgers, E. B.; Forsythe, T. D., and Grannemann, K. L. Browns Ferry Biothermal Research Series. II. Effects of temperature on bluegill and walleye, and periphyton, macroinvertebrate, and zooplankton communities in experimental ecosystems. EPA 600/3-79-092. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Duluth, MN, TV-35013A.
- Wrubleski, D. A., H. R. Murkin, A. G. van der Valk, and C. B. Davis. 1997. Decomposition of litter of three mudflat annual species in a northern prairie marsh during drawdown. *Plant Ecol.* 129:141-48 #650
- X
- Xue, W. and R.M. Carlson. 1988. Separation characteristics of alkylated guanines in high-performance liquid chromatography. *Journal of Chromatography* 447:81-90. #1988-28
- Xue, W., A.K. Samanta, and R.M. Carlson. 1990. The identification and quantitation of alkylated nucleobases by high-performance liquid chromatography with UV photodiode array detection. *Journal of Chromatographic Science* 28:477-481. #1990-7
- Y
- Young, R.C., G.A. Anderson, and E.L. Morgan. 198? Response of smallmouth bass to pH dependent water quality perturbations. Preliminary draft submitted by Tennessee Valley Authority to U.S. Environmental Protection Agency. #198?-8
- Young, T.C. and J.V. DePinto. 1988. Factors affecting the efficiency of some estimators of fluvial total phosphorus load. *Water Resources Research* 24(9):1535-1540. #1988-12
- Young, T.C., J.V. DePinto, and T.W. Kipp. 1987. Adsorption and desorption of Zn, Cu, and Cr by sediments from the Raisin River (Michigan). *J. Great Lakes Res.* 13(3):353-366. #1987-18
- Young, T.C., J.V. DePinto, S.C. Martin, and J.S. Bonner. 1985. Algal-available particulate phosphorus in the Great Lakes basin. *J. Great Lakes Res.* 11(4):434-446. #1985-27
- Yount, J. D. 1998. Human carrying capacity as an indicator of regional sustainability. *Environ. Monit. Assess.* 51:507-9 #675
- Yount, J. D. and G. J. Niemi. 1990. Recovery of lotic communities and ecosystems from disturbance--a

- narrative review of case studies. *Environ. Manage.* 14:547-69 #437
- Yount, J. D. and J. E. Richter. 1986. Effects of pentachlorophenol on periphyton communities in outdoor experimental streams. *Arch. Environ. Contam. Toxicol.* 15:51-60 #334
- Yount, J. D. and L. J. Shannon. 1987. Effects of aniline and three derivatives on laboratory microecosystems. *Environ. Toxicol. Chem.* 6:463-68 #358
- Yount, J.D. 1989. Analysis of frequency of criteria exceedences as related to aquatic community impact. Internal report. Environmental Research Laboratory, U.S. Environmental Protection Agency, Duluth, MN. #1989-47
- Yount, J.D. 1990. The eco-invaders. *EPA Journal* 16(6):51-53. #1990-15
- Yount, J.D. 1975. The effect of nonremoval clear-cutting and pine reforestation on the cation composition of a hardwood forest soil. In: *Mineral cycling in southeastern ecosystems*. ERDA Symposium Series (CONF-740513). F.G. Howell, J.B. Gentry, and F.G. Howell, eds. Pp. 744-753. Technical Information Center, Oak Ridge, TN. #1975-11
- Yount, J.D. 1975. Forest-floor nutrient dynamics of southern Appalachian hardwood and white pine plantation ecosystems. In: *Mineral cycling in southeastern ecosystems*. ERDA Symposium Series (CONF-740513). F.G. Howell, J.B. Gentry, and F.G. Howell, eds. Pp. 598-608. Technical Information Center, Oak Ridge, TN. #1975-10
- Yount, J.D. and L.J. Shannon. 1988. State changes in laboratory microecosystems in response to chemicals from three structural groups. In: *Functional testing of aquatic biota for estimating hazards of chemicals*. J. Cairns, Jr. and G. Pratt, eds. Pp. 86-96. ASTM STP 988. American Society for Testing and Materials, Philadelphia, PA. #1988-35
- Yount, J. D., ed. Ecology and management of the zebra mussel and other introduced aquatic nuisance species: EPA Workshop on Zebra Mussels and other Introduced Aquatic Nuisance Species, September 26-28, 1990, Saginaw, MI. EPA 600/3-91-003. Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C..
- Yue, S. and Gan T.Y. 2004. Simple scaling properties of Canadian annual average streamflow. *Advances in Water Resources*. 27:481-95 #825
- Yue, S. and P. Pilon. 2004. A comparison of the power of the *t* test, Mann-Kendall and bootstrap tests for trend detection. *Hydrological Sciences -- Journal -- Des Sciences Hydrologiques*. 49:21-37 #821
- Yue, S. and M. Hashino. 2003. Long term trends of annual and monthly precipitation in Japan. *Journal of the American Water Resources Association*, 39(3):587596. #2003-9
- Yue, S. and M. Hashino. 2003. Temperature trends in Japan: 1900-1996. *Theoretical and Applied Climatology*, 75(1/2):15-27. #2003-6
- Yue, S. and P. Pilon. 2003. Interaction between deterministic trend and autoregressive process. *Water Resources Research*, 39(4):1-7. #2003-7
- Yue, S., P. Pilon, and B. Phinney. 2003. Canadian streamflow trend detection: impacts of serial and cross-correlation. *Hydrological Sciences-Journal-des Sciences Hydrologiques*, 48(1):51-63. #2003-8
- Yurista, P.M. 2000. Cyclomorphosis in *Daphnia lumholtzi* induced by temperature. *Freshwater Biol.*, 43:207-213. #2000-13
- Yurista, P.M. 1999. A model for temperature correction of size-specific respiration in *Bythotrephes cederstroemi* and *Daphnia middendorffiana*. *J. of Plankton Res.*, 21(4):721-734. #1999-19
- Yurista, P.M. 1999. Temperature-dependent energy budget of an Arctic Cladoceran, *Daphnia middendorffiana*. *Fresh. Biol.*, 42:21-34. #1999-17
- Yurista, P.M. and W.J. O'Brien. 2001. Growth, survivorship and reproduction of *Daphnia middendorffiana* in several Arctic lakes and ponds. *Journal of Plankton Research*, 23(7):733-744. #2001-5
- Yurista, P.M., G.T. Rice, and D.S. White. 2000. Long-term establishment of *Daphnia lumholtzi* sars in Kentucky Lake, USA. *Verh. Internat. Verein. Limnol.*, 27:3102-3106. #2000-12
- Yurista, P.M. and K.L. Schulz. 1995. Bioenergetic analysis of prey consumption by *Bythotrephes cederstroemi* in Lake Michigan. *Can. J. Fish. Aquat. Sci.*, 52:141-150. #1995-18
- Yurista, P.M. and K.L. Schulz. 1996. Comments on "A model for growth, development, and diet selection by the invertebrate predator *Bythotrephes cederstroem*" by J.T. Lehman and D.K. Branstrator. *J. Great Lakes Res.* 21:610-619. *J. Great Lakes Res.*, 22(4):925-929. #1996-19
- Z
- Zabel, E. W., P. M. Cook, and G. S. Peterson. 1995. Potency of 3,3',4,4',5-pentachlorobiphenyl (PCB 126), alone and in combination with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD), to produce lake

- trout early life-stage mortality. *Environ. Toxicol. Chem.* 14:2175-79 #593
- Zabel, E. W., P. M. Cook, and R. E. Peterson. 1995. Toxic equivalency factors of polychlorinated dibenzo-*p*-dioxin, dibenzofuran and biphenyl congeners based on early life stage mortality in rainbow trout (*Oncorhynchus mykiss*). *Aquat. Toxicol.* 31:315-28 #594
- Zacharewski, T., L. Safe, and S. Safe. 1989. Comparative analysis of polychlorinated dibenzo-*p*-dioxin and dibenzofuran congeners in Great Lakes fish extracts by gas chromatography-mass spectrometry and in vitro enzyme induction activities. *Environmental Science and Technology* 23:730-735. #1989-5
- Zischke, J. A. and J. W. Arthur. 1987. Effects of elevated ammonia levels on the fingernail clam, *Musculium transversum*, in outdoor experimental streams. *Arch. Environ. Contam. Toxicol.* 16:225-31 #359
- Zischke, J. A., J. W. Arthur, R. O. Hermanutz, S. F. Hedtke, and J. C. Helgen. 1985. Effects of pentachlorophenol on invertebrates and fish in outdoor experimental channels. *Aquat. Toxicol.* 7:37-58 #308
- Zischke, J. A., J. W. Arthur, K. J. Nordlie, R. O. Hermanutz, D. A. Standen, and T. P. Henry. 1983. Acidification effects on macroinvertebrates and fathead minnows (*Pimephales promelas*) in outdoor experimental channels. *Water Res.* 17:47-63 #272